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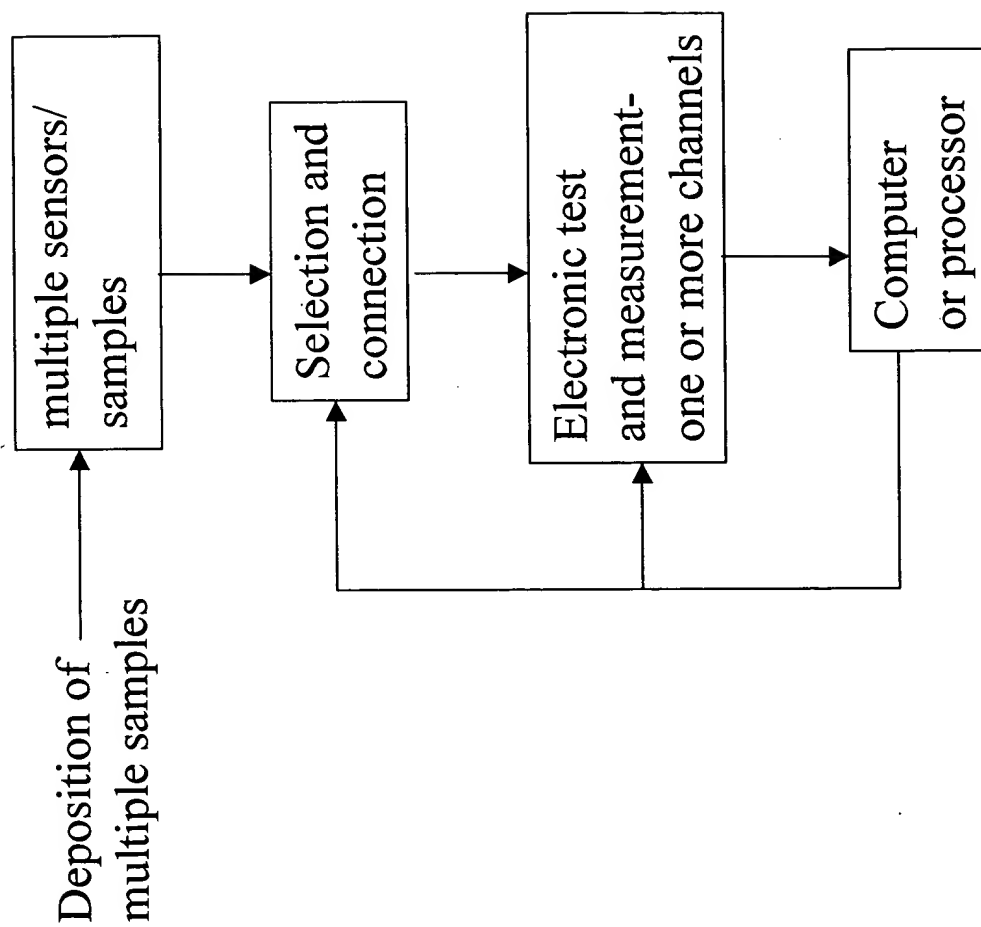
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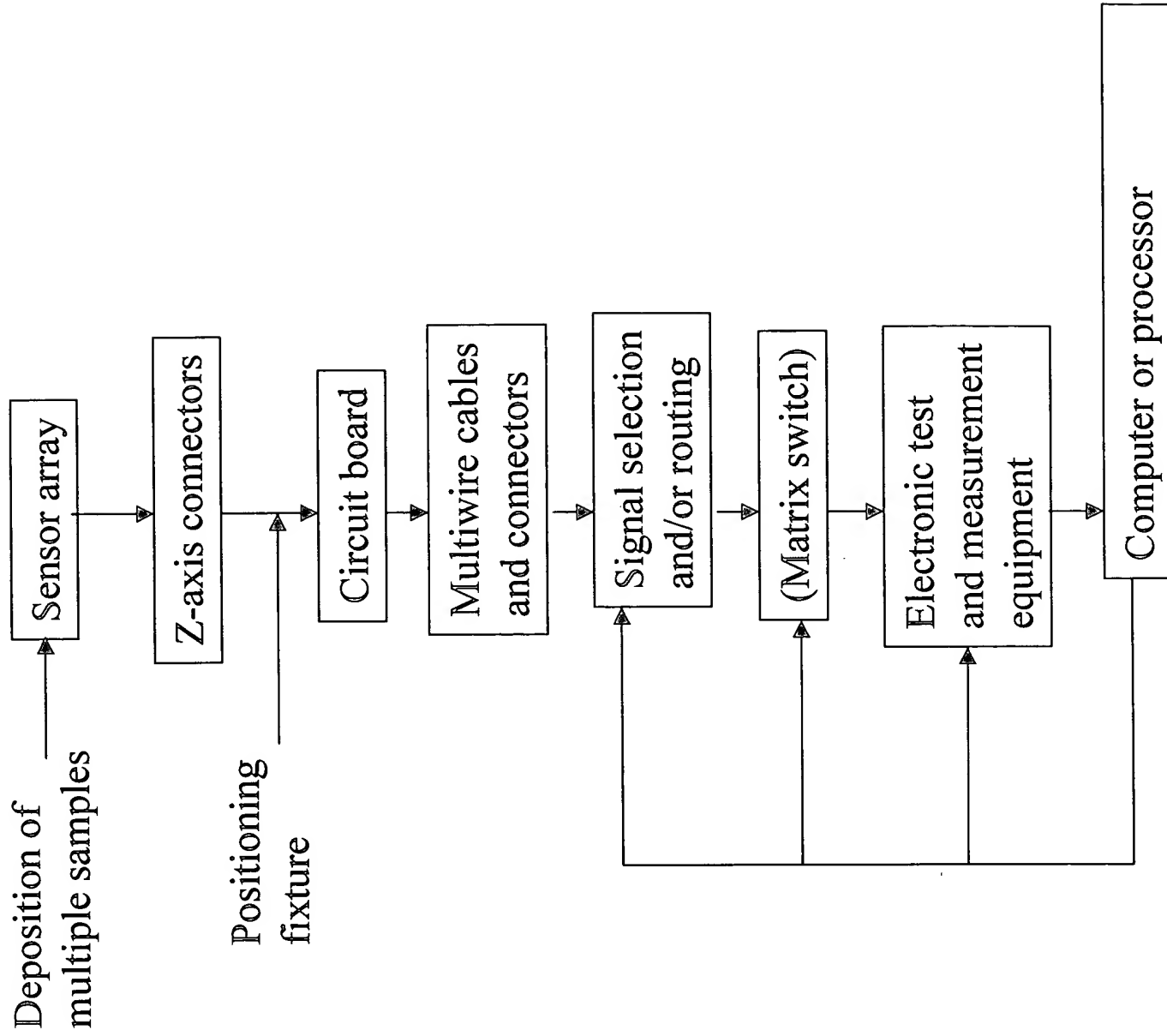
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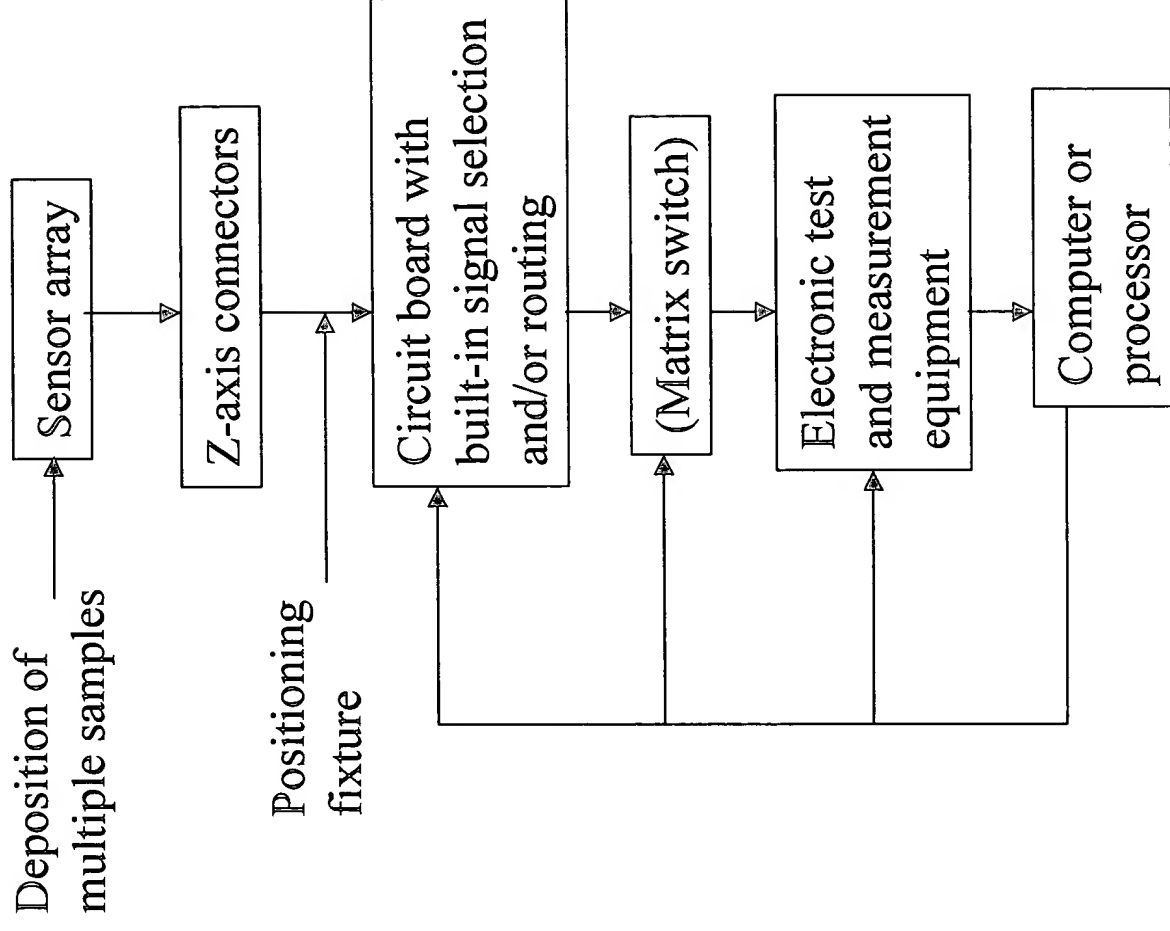
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Generic system concept





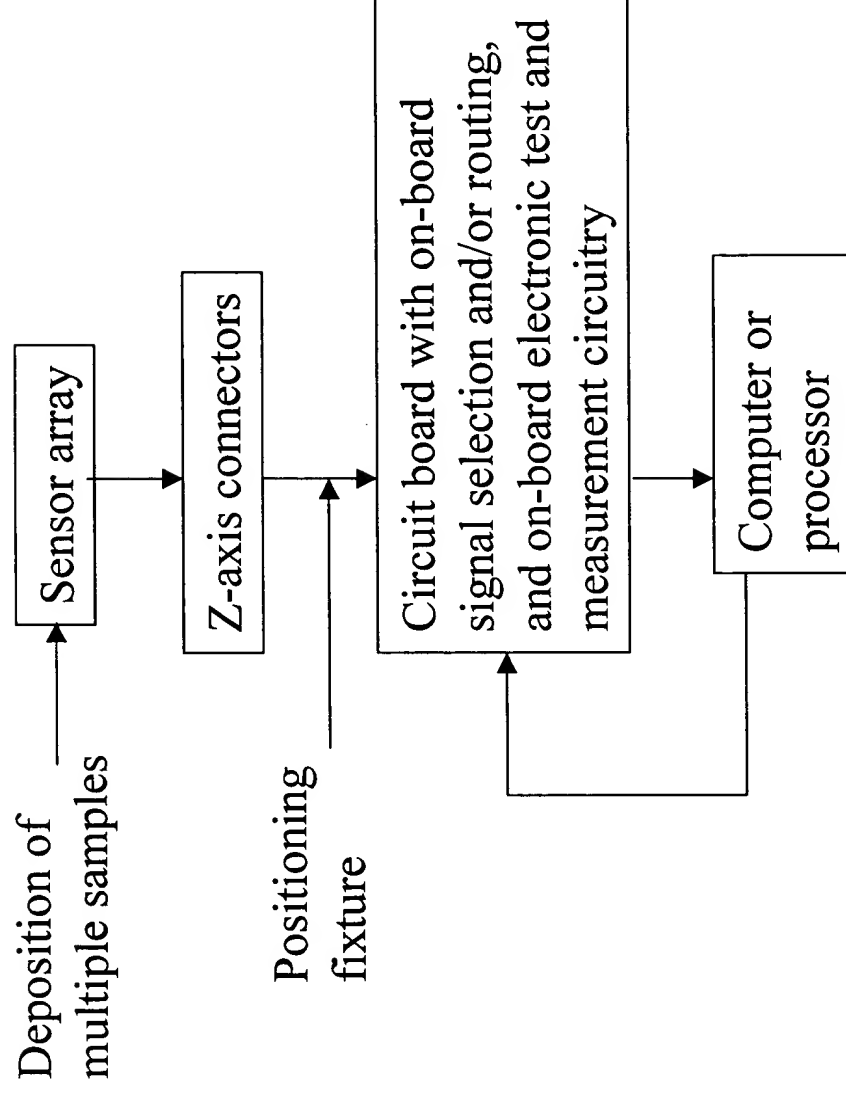
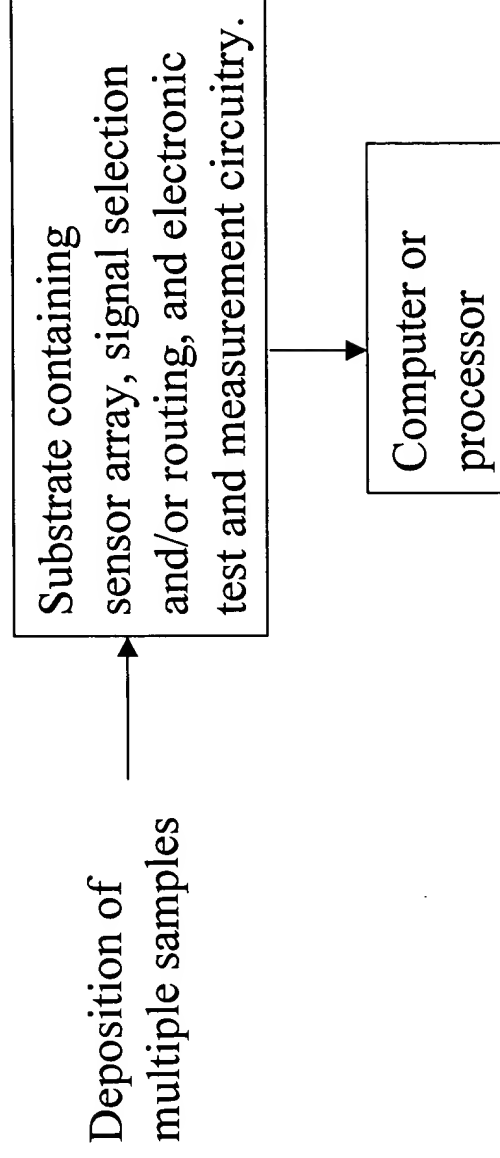


FIG 1D



09210435-121193

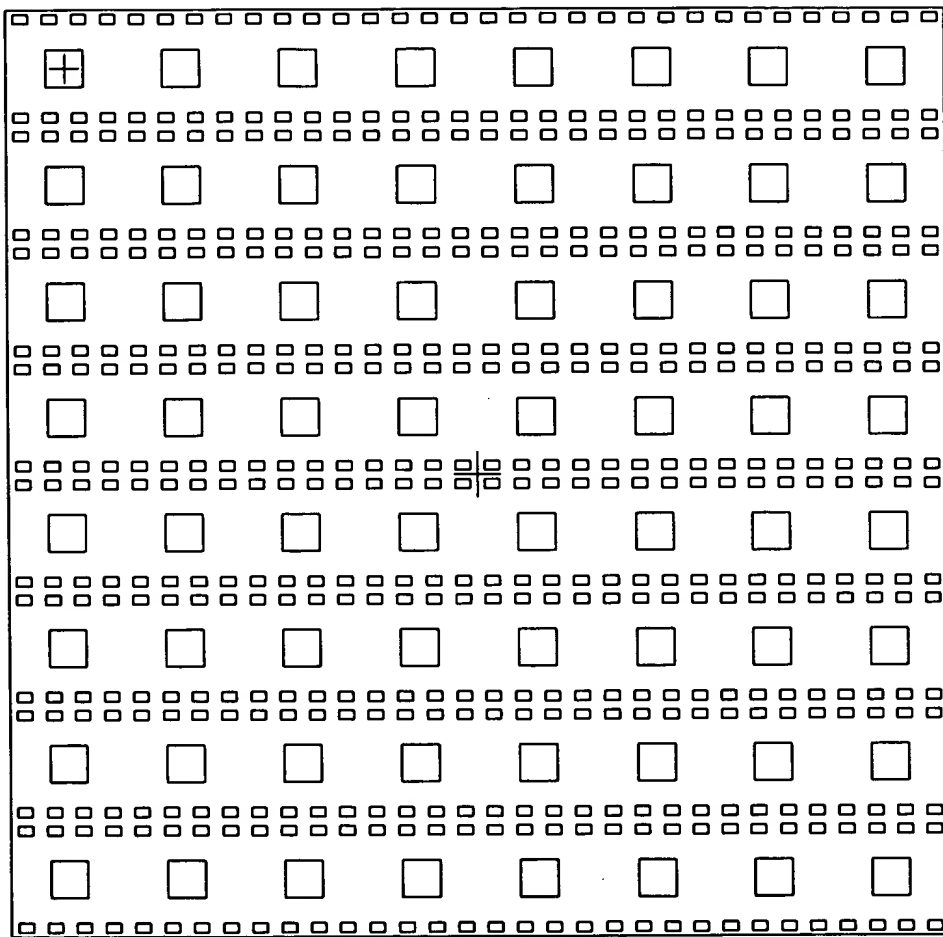


FIG 2A

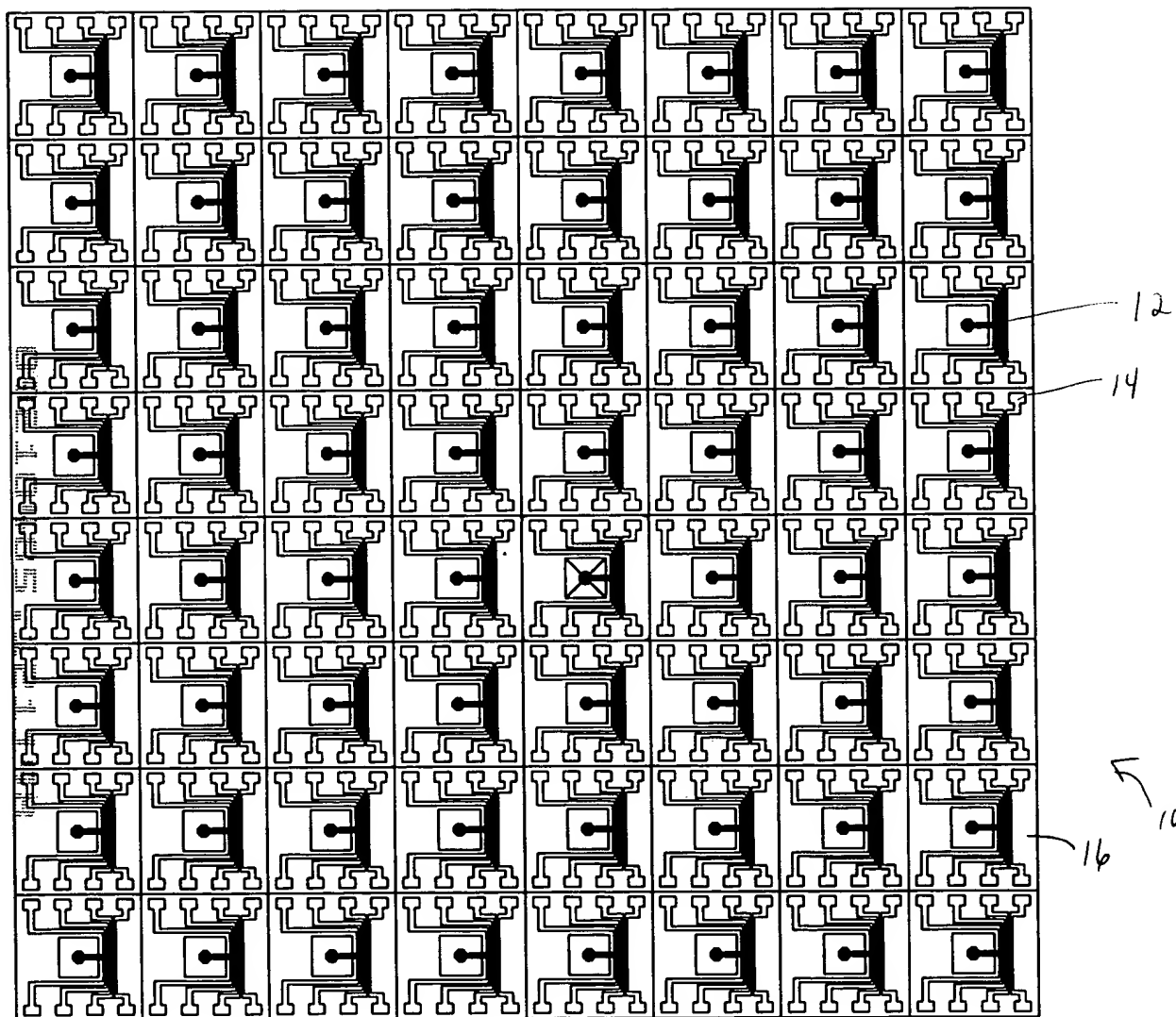


FIG 2B.

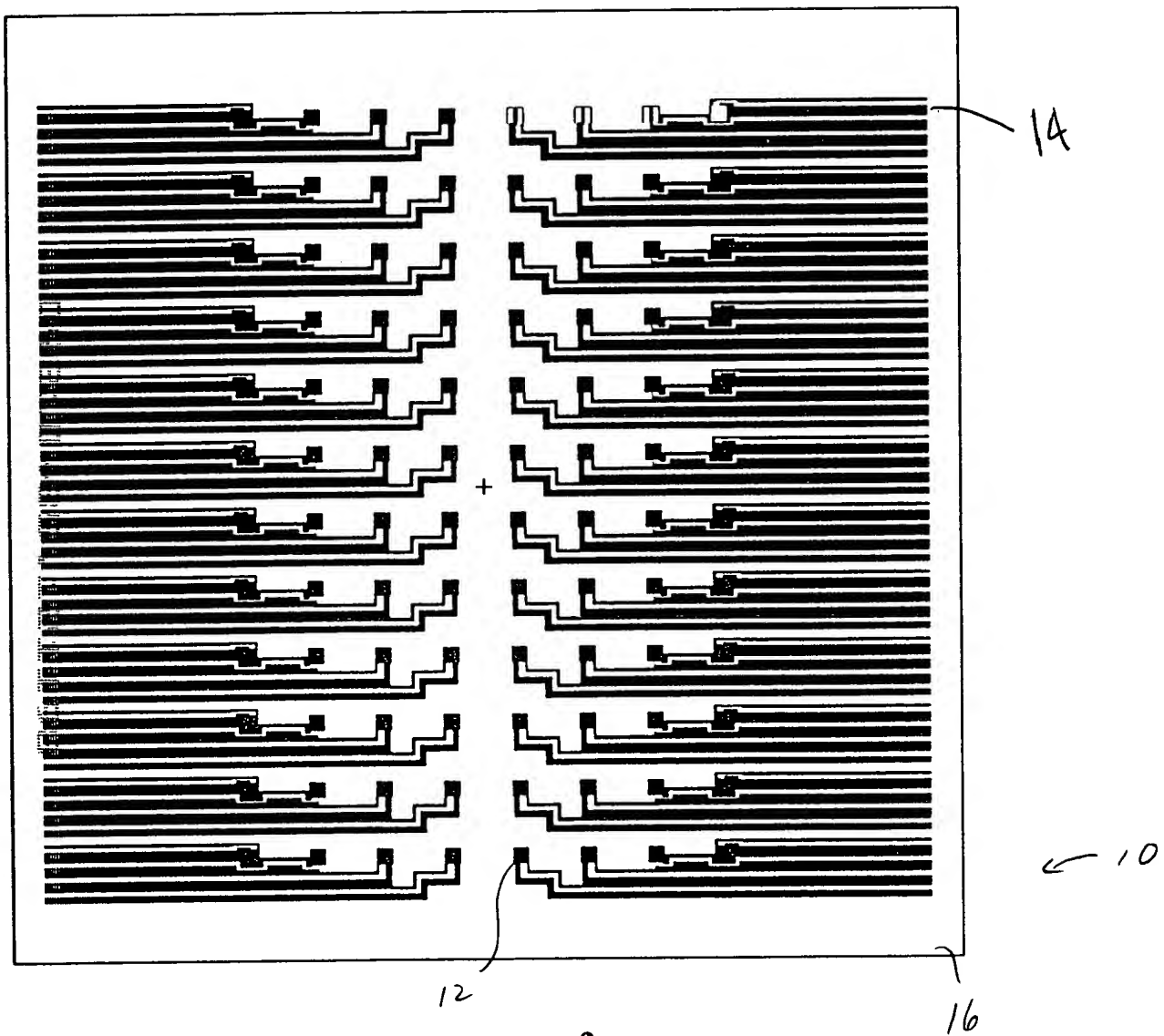
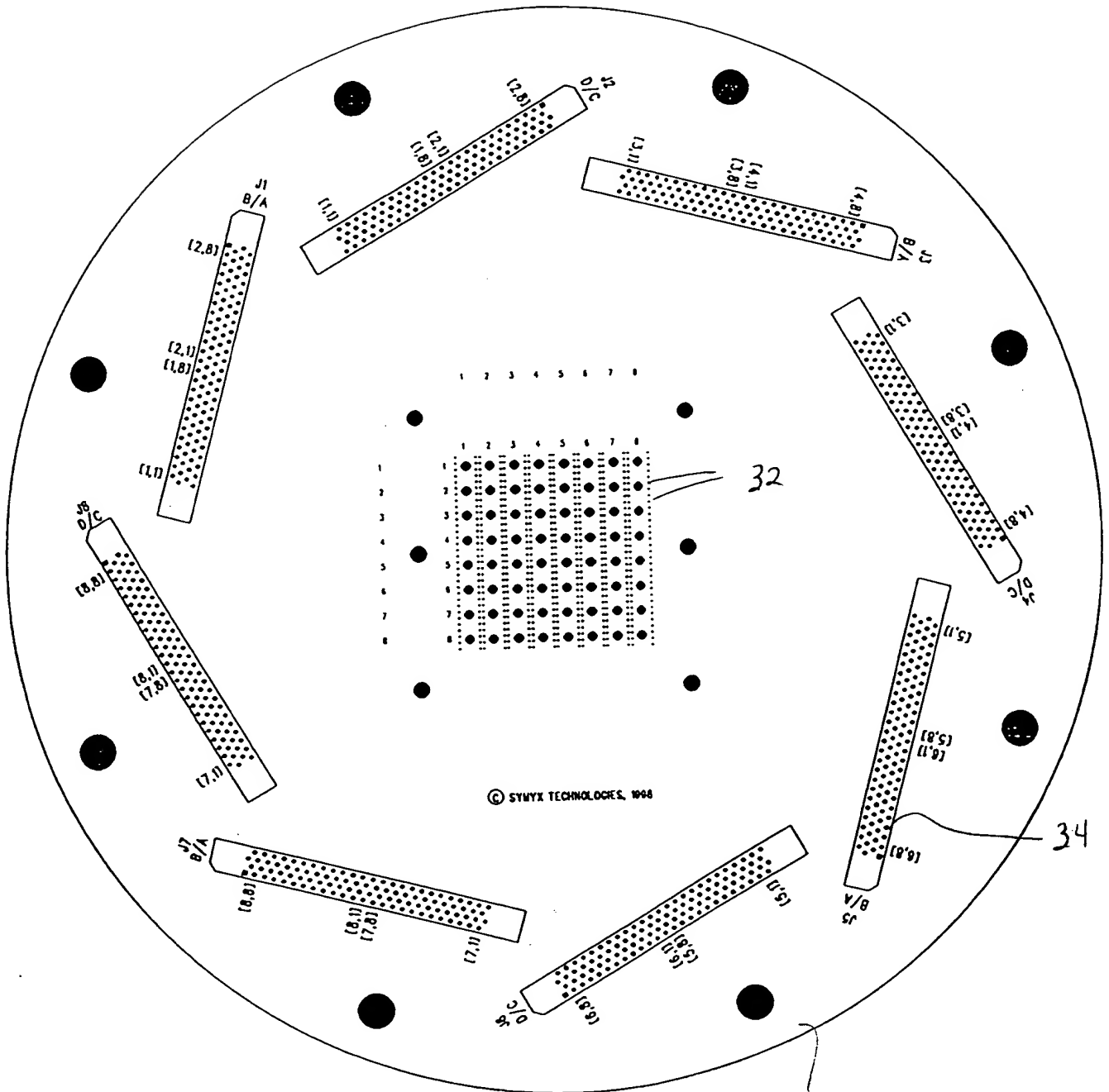


FIG 2C

$$(1, 1)$$

FIG 2D



FG 3A

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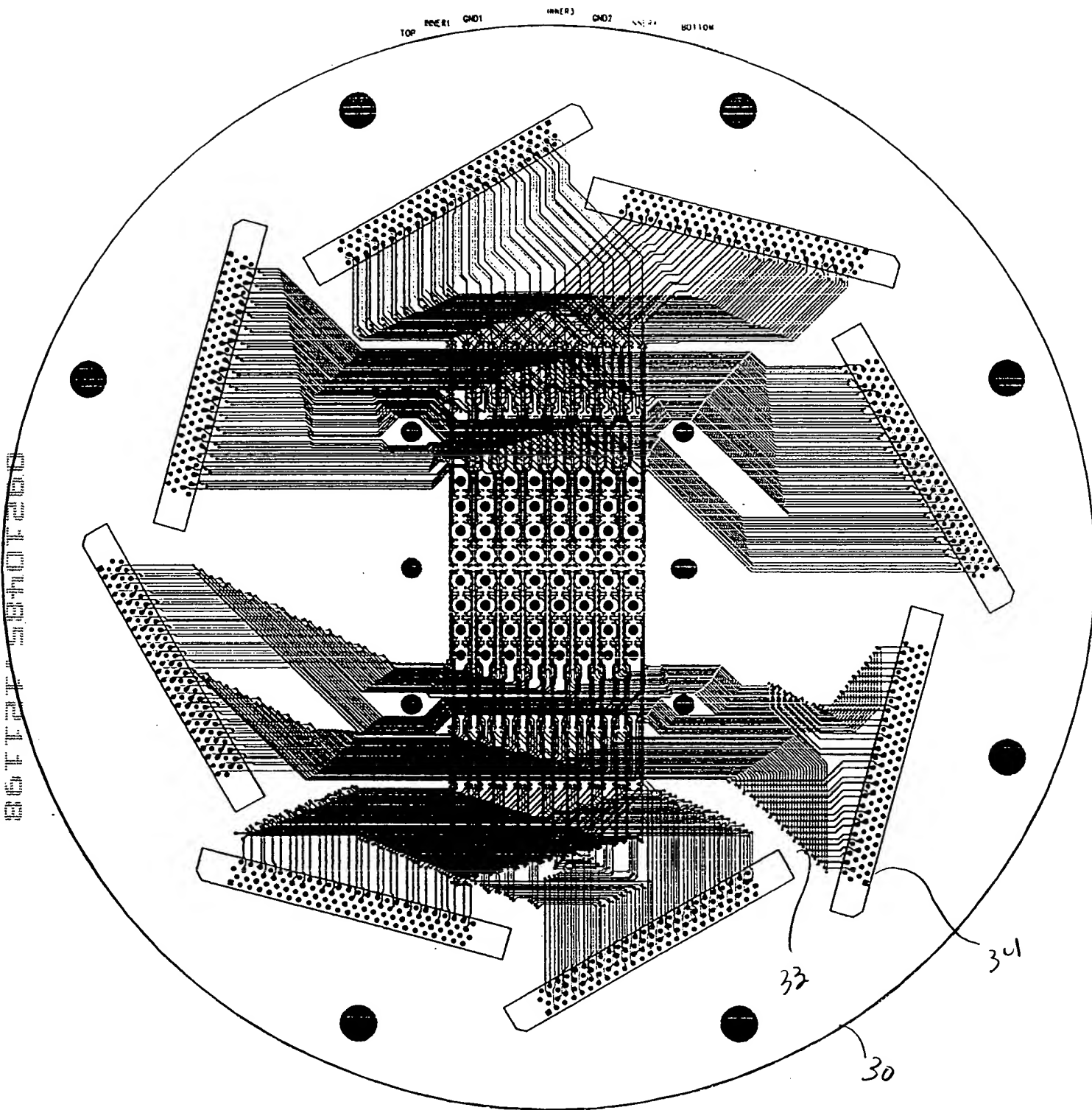


FIG 3B

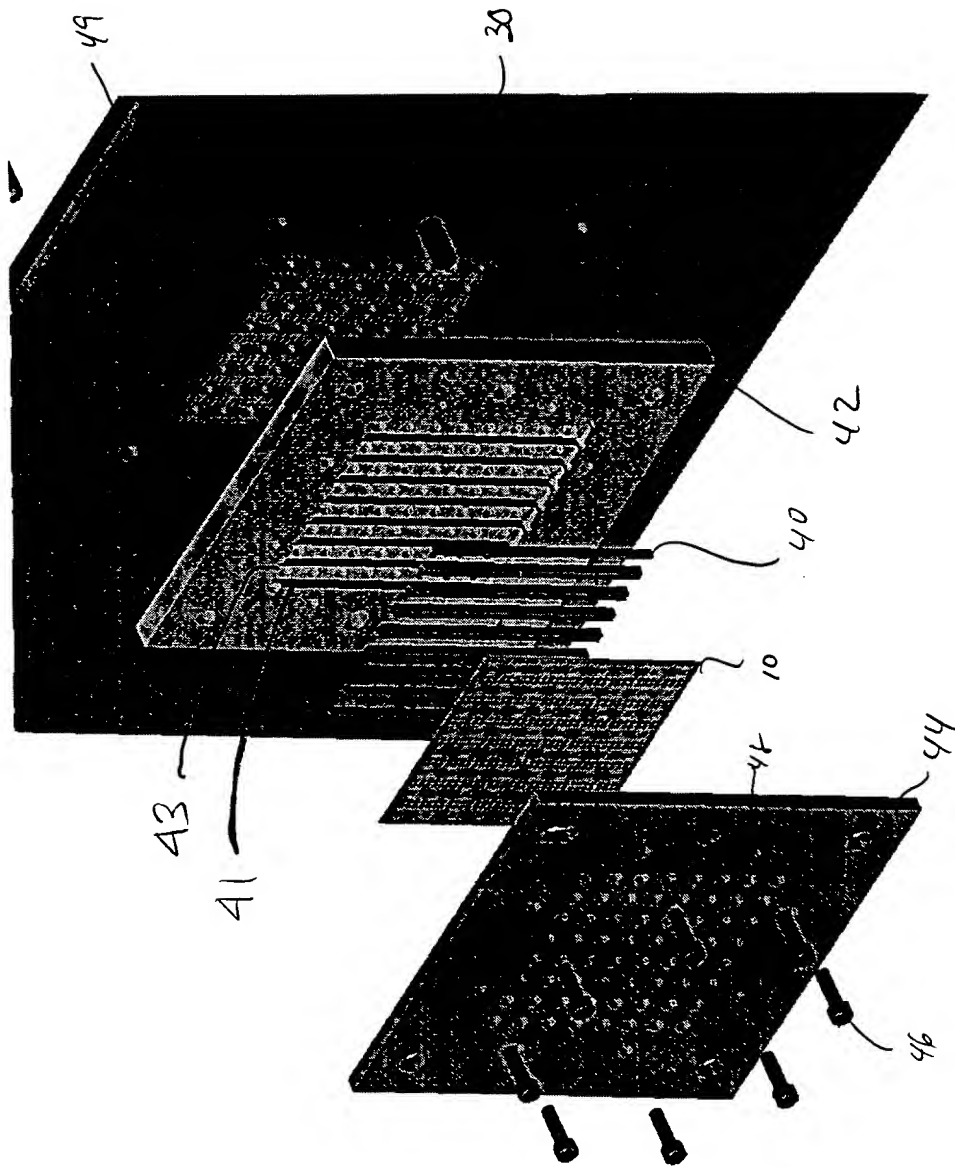
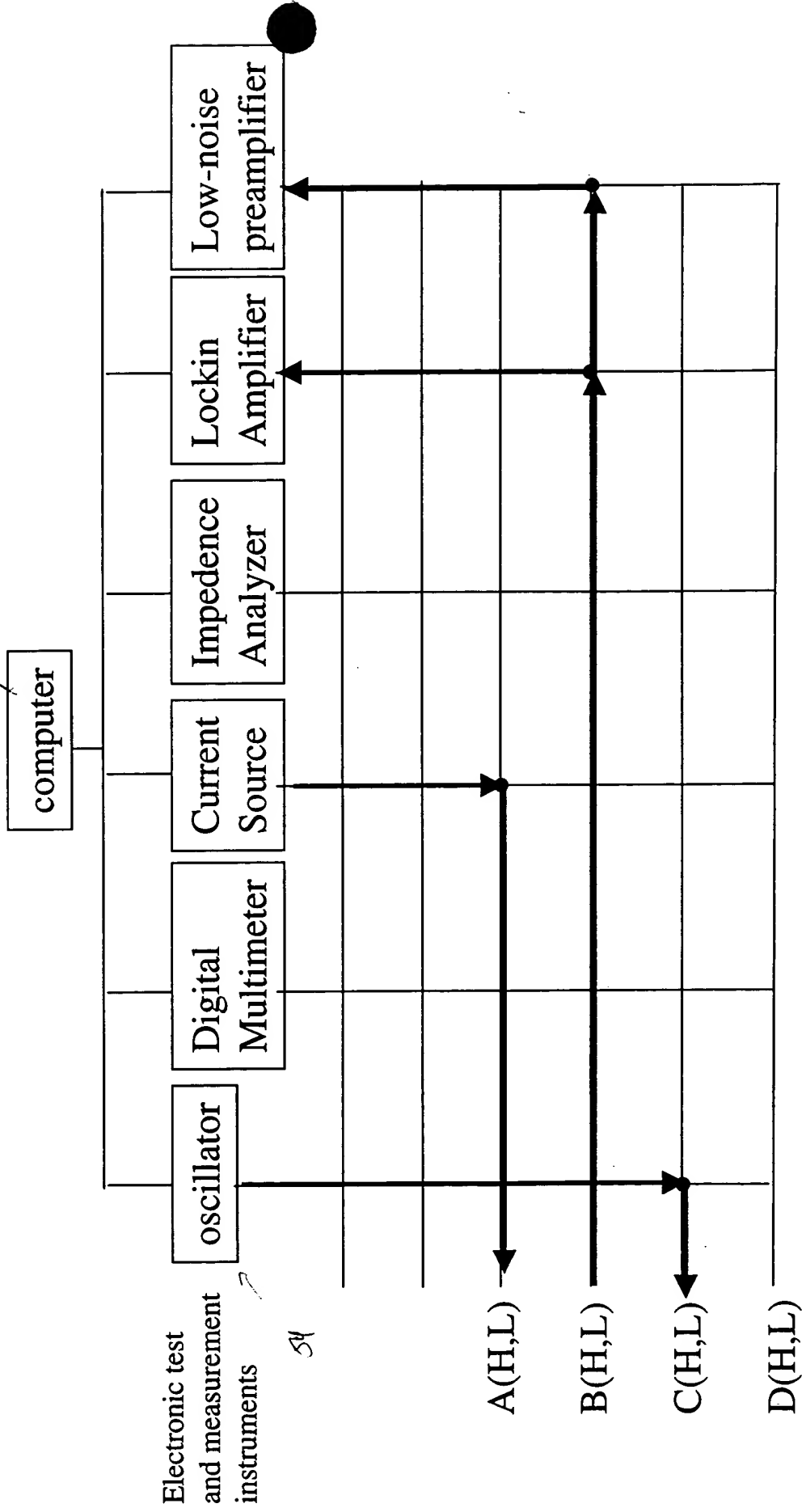


FIG 4

52



The computer also controls the multiplexer and the matrix switch.

Fig 5

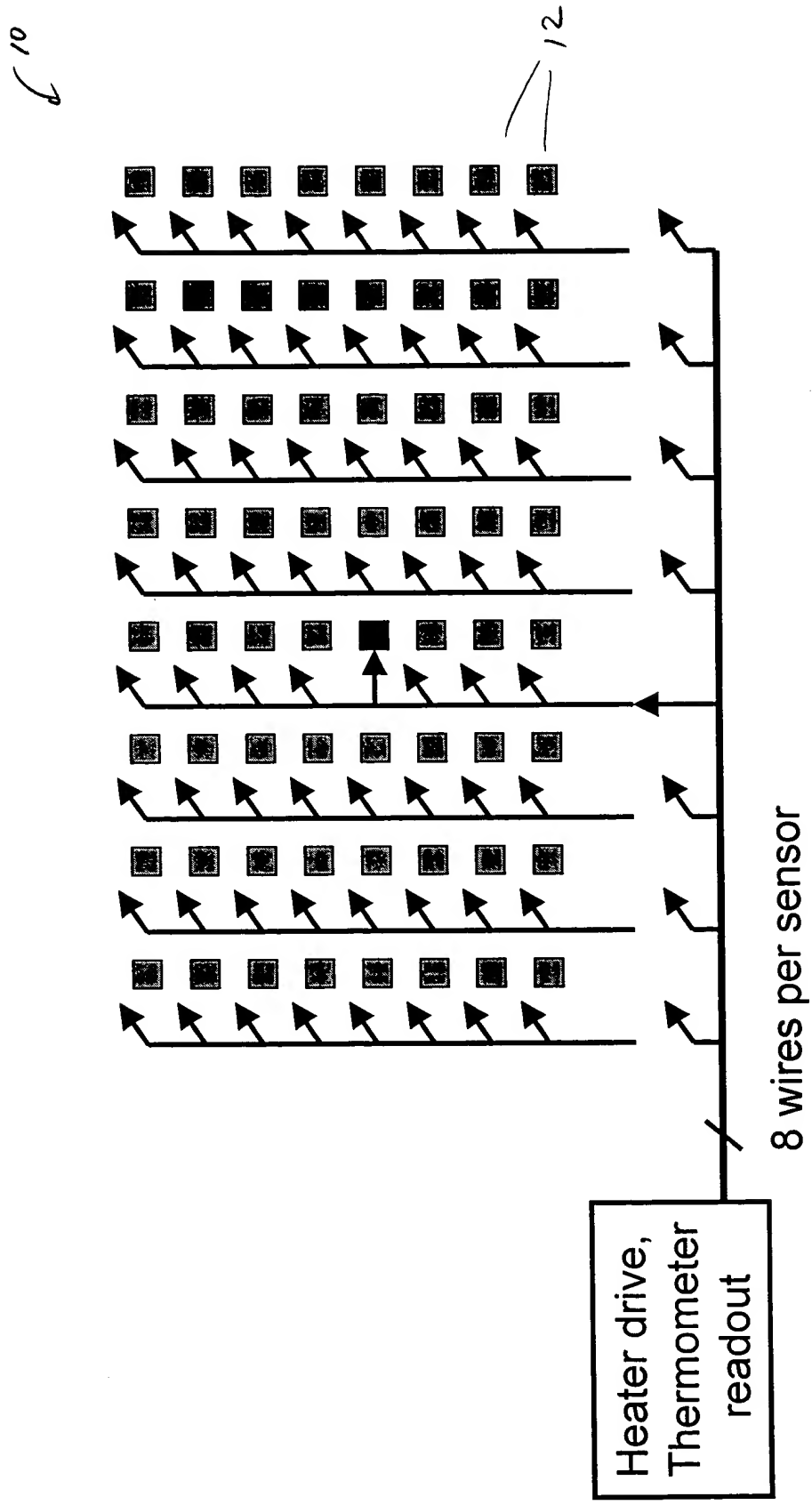


FIG. 6A

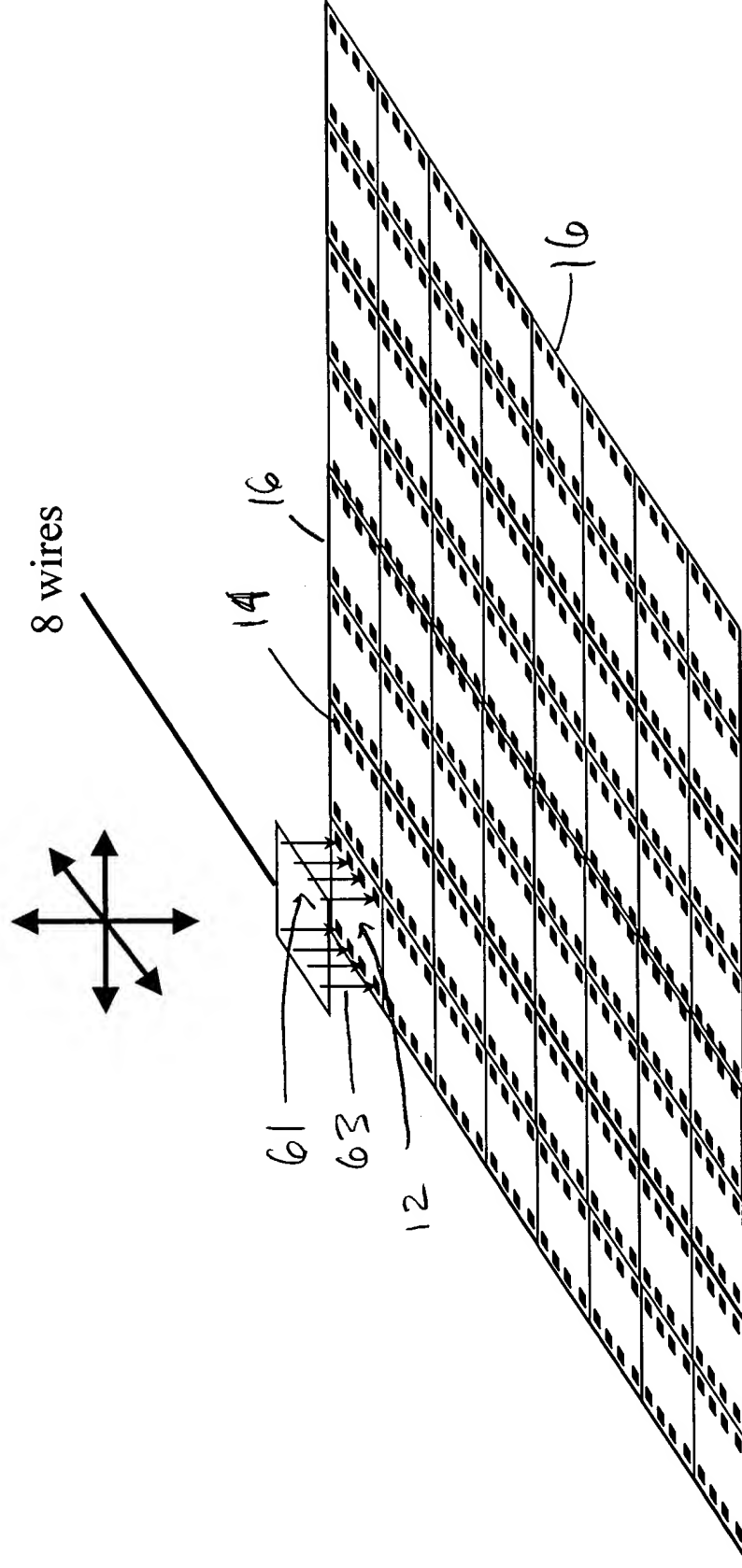


FIGURE 6B

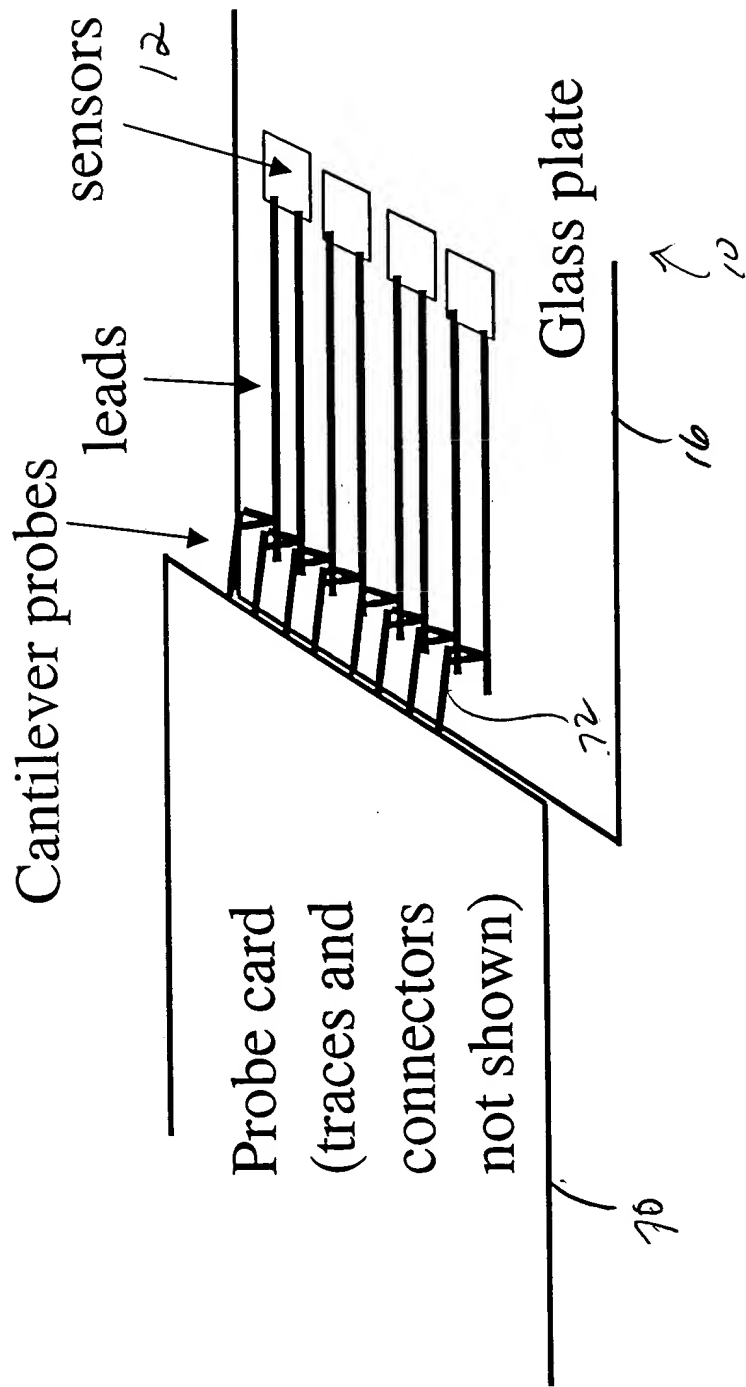
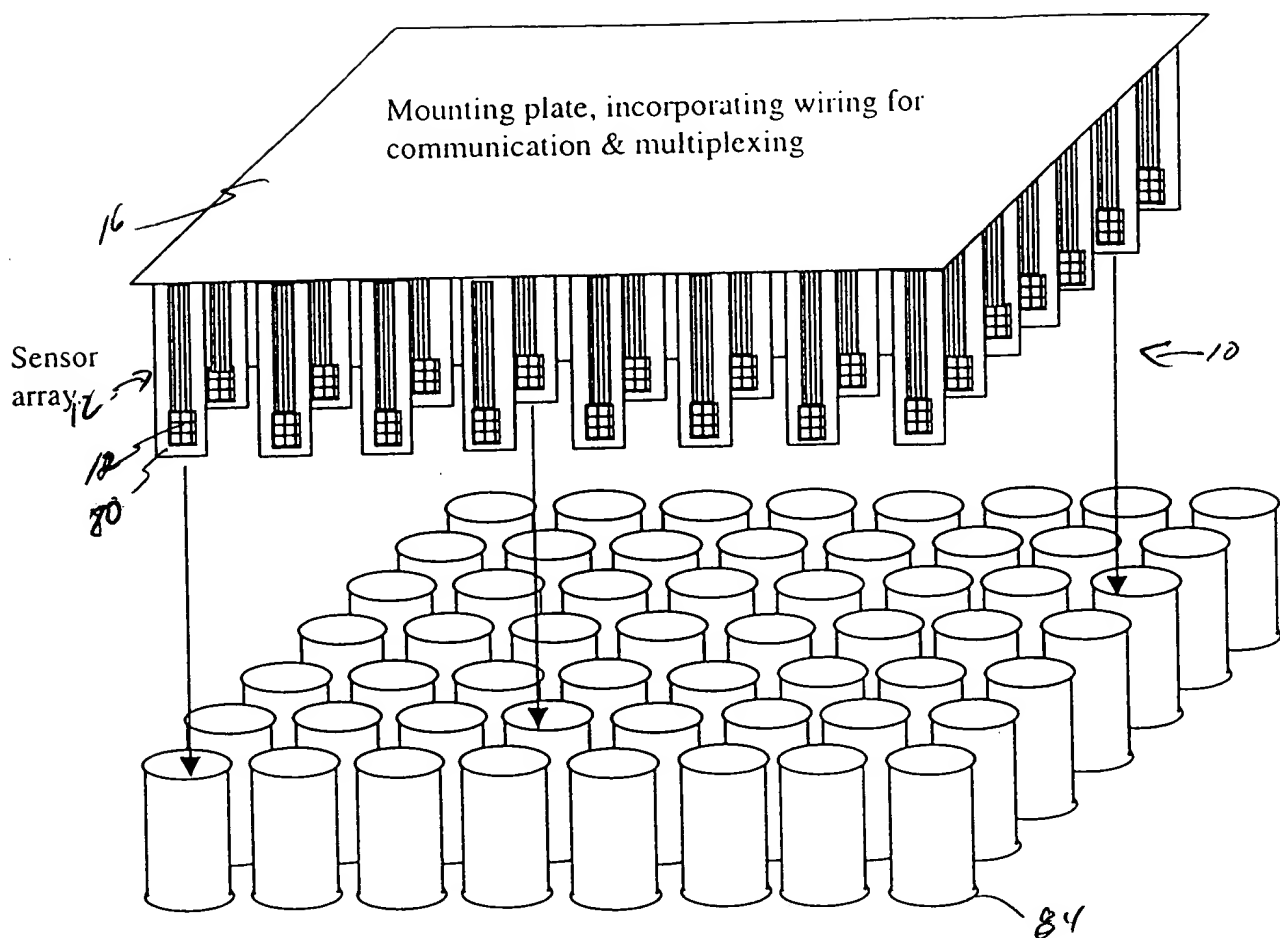


FIG 7

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Array of vessels containing different solutions

FIG. 8

Measurements are made either 1) on solutions, using immersed sensors; or 2) on dried films deposited on the sensors by dipping, removing, and drying.

CONFIDENTIAL INFORMATION  
Symyx Technologies, April 13, 1998

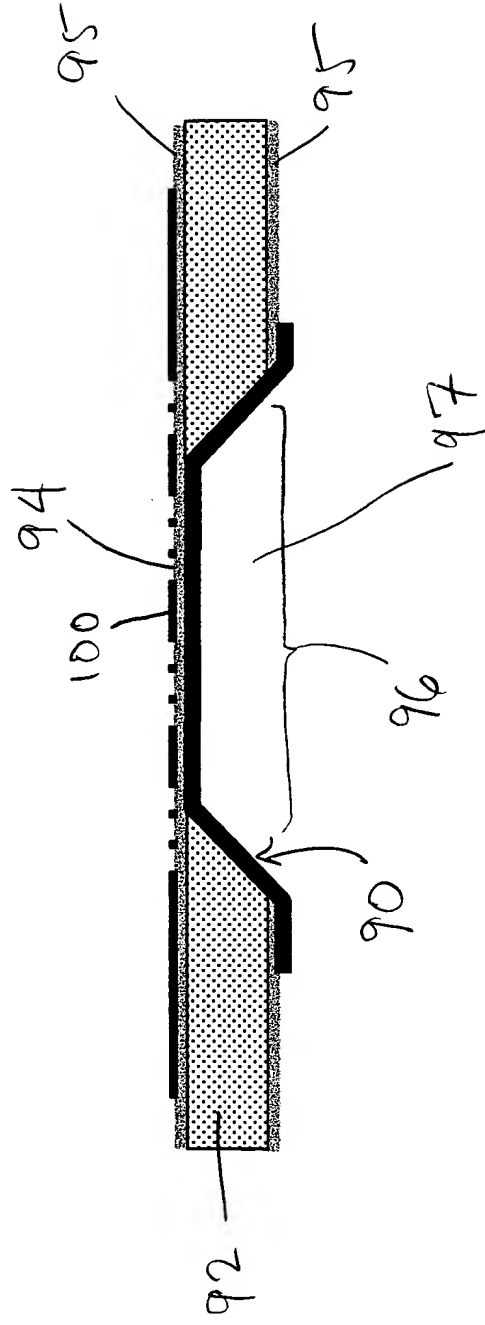


FIG. 9A

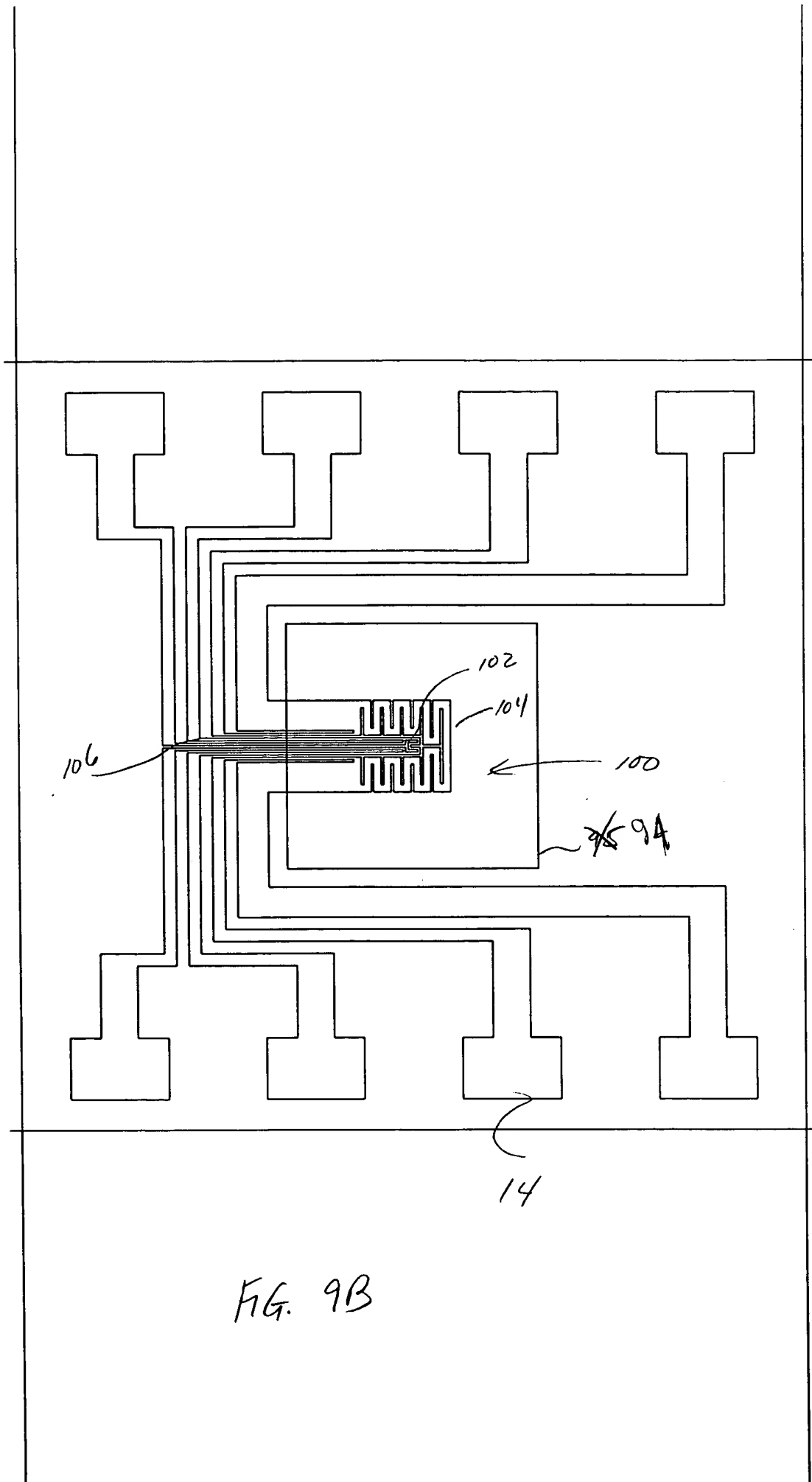


FIG. 9B

FIG. 9C

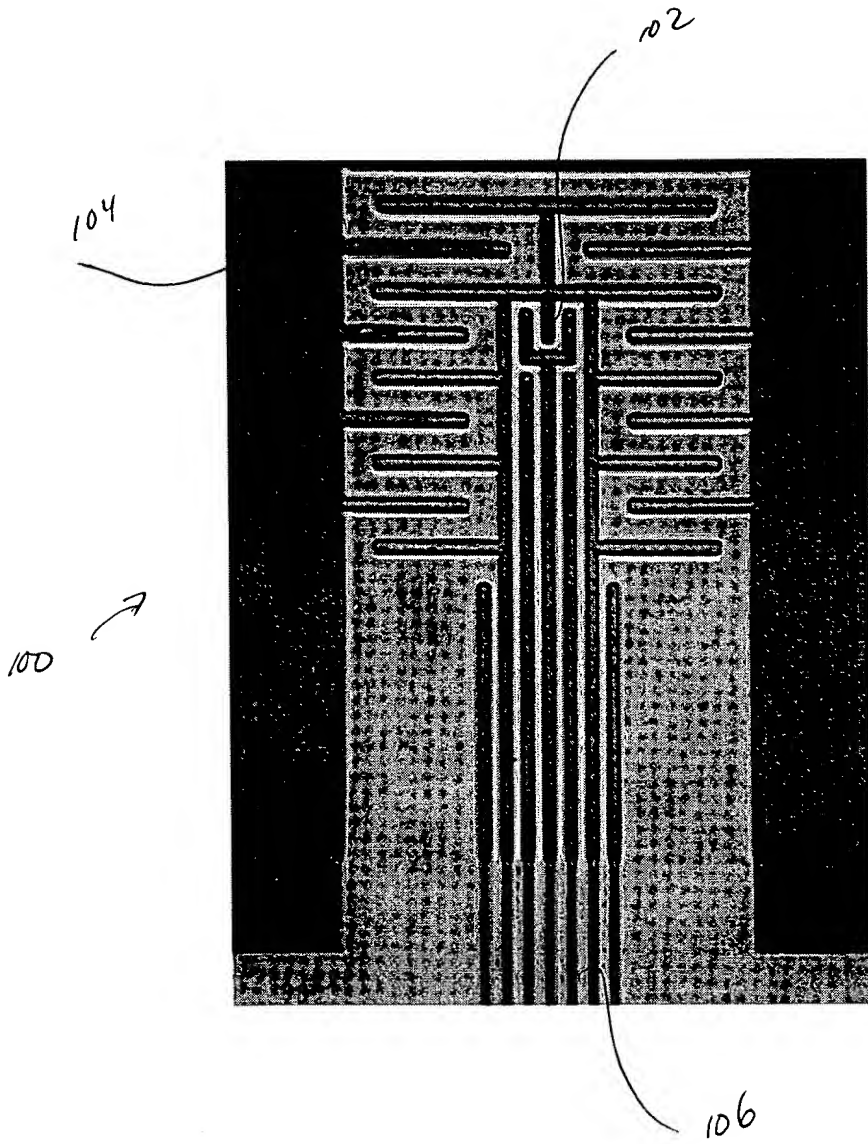


FIG 9C

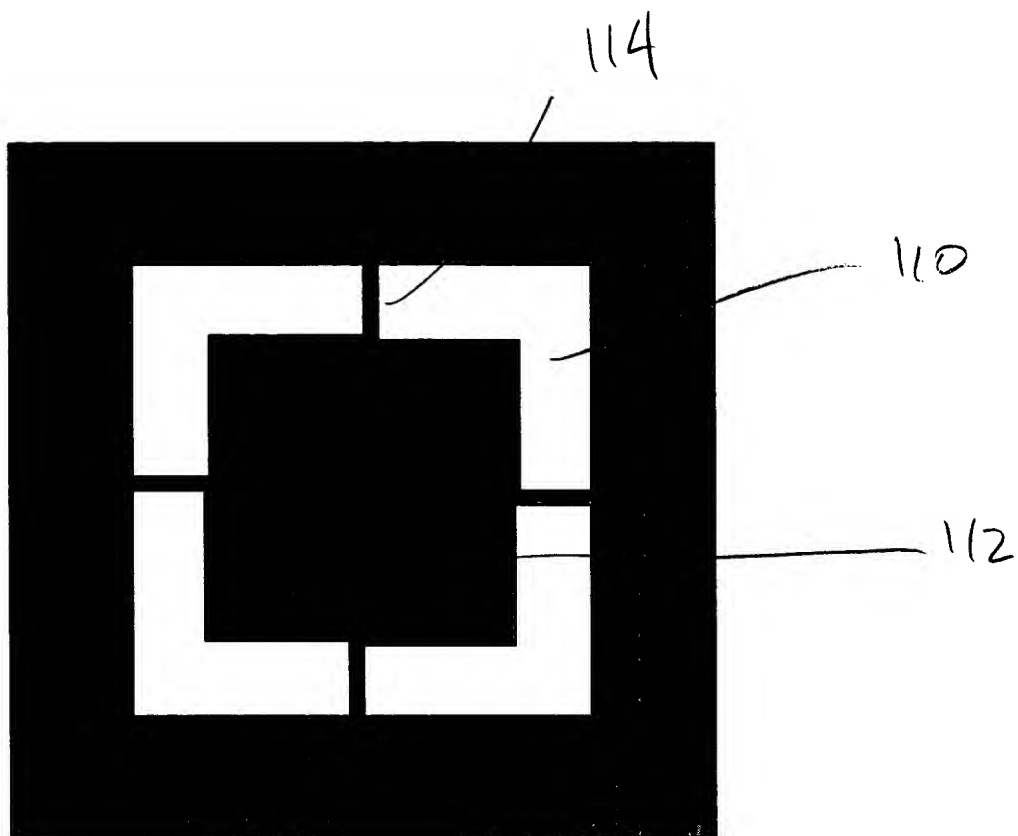


FIG. 10

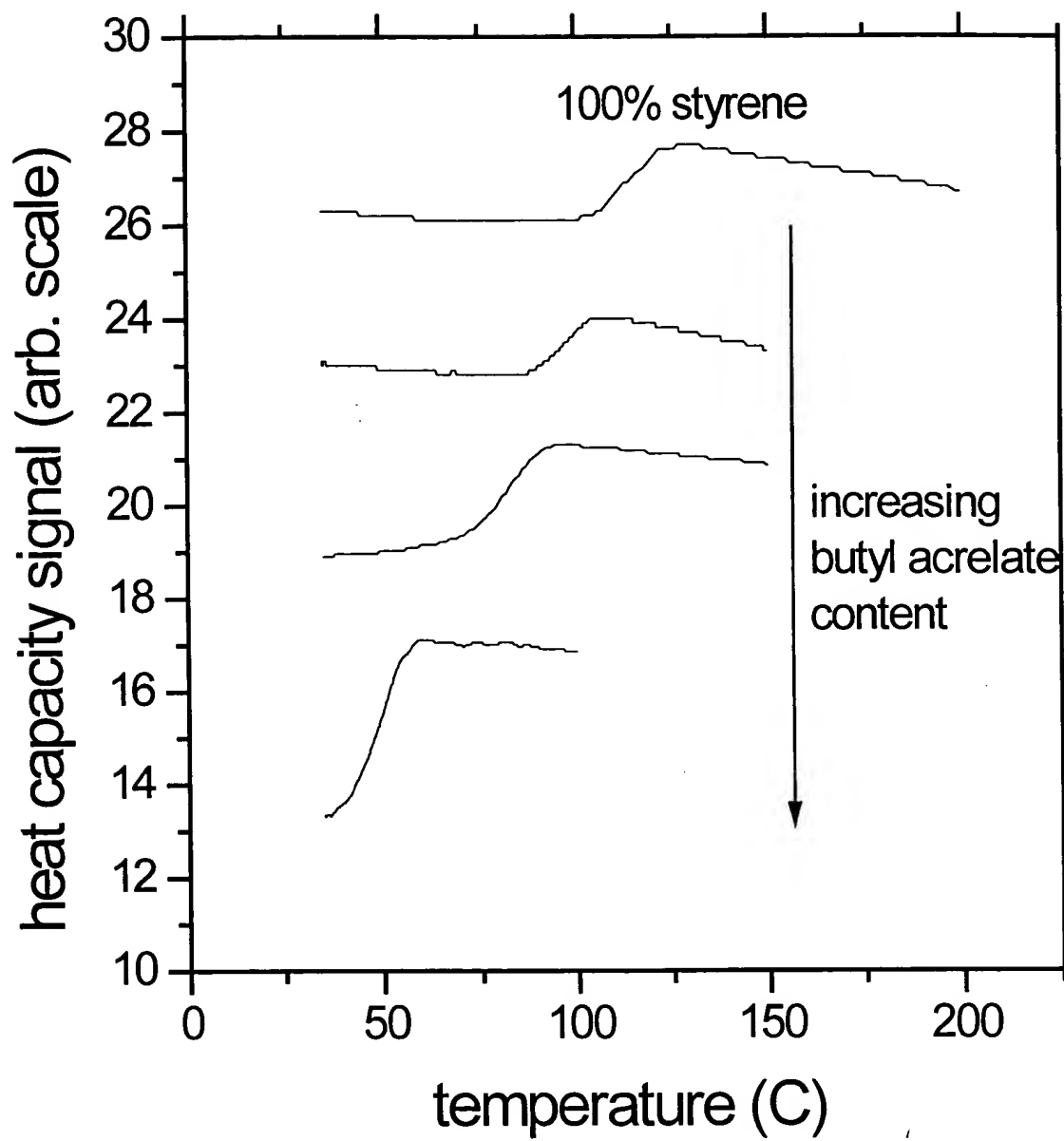
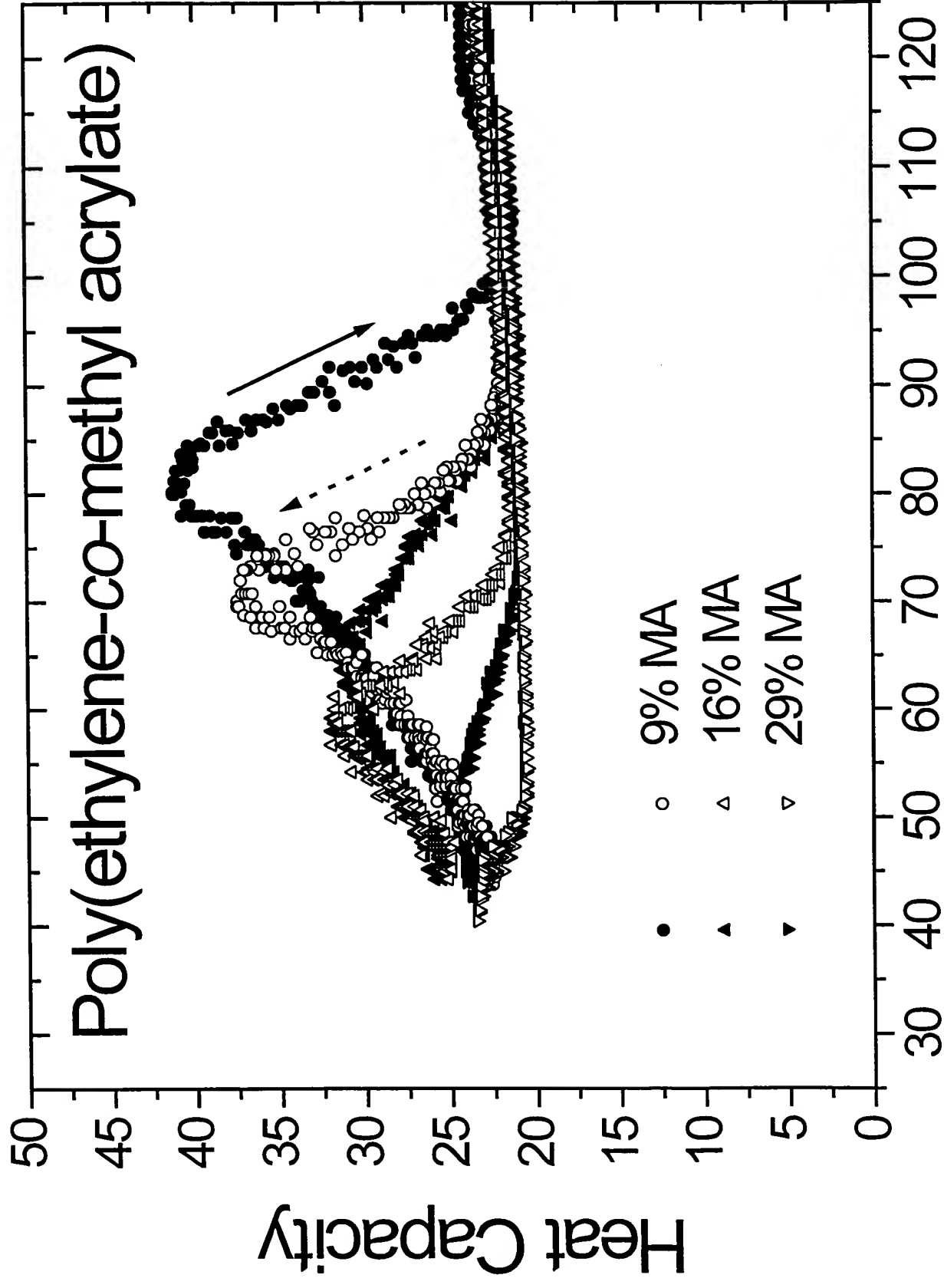
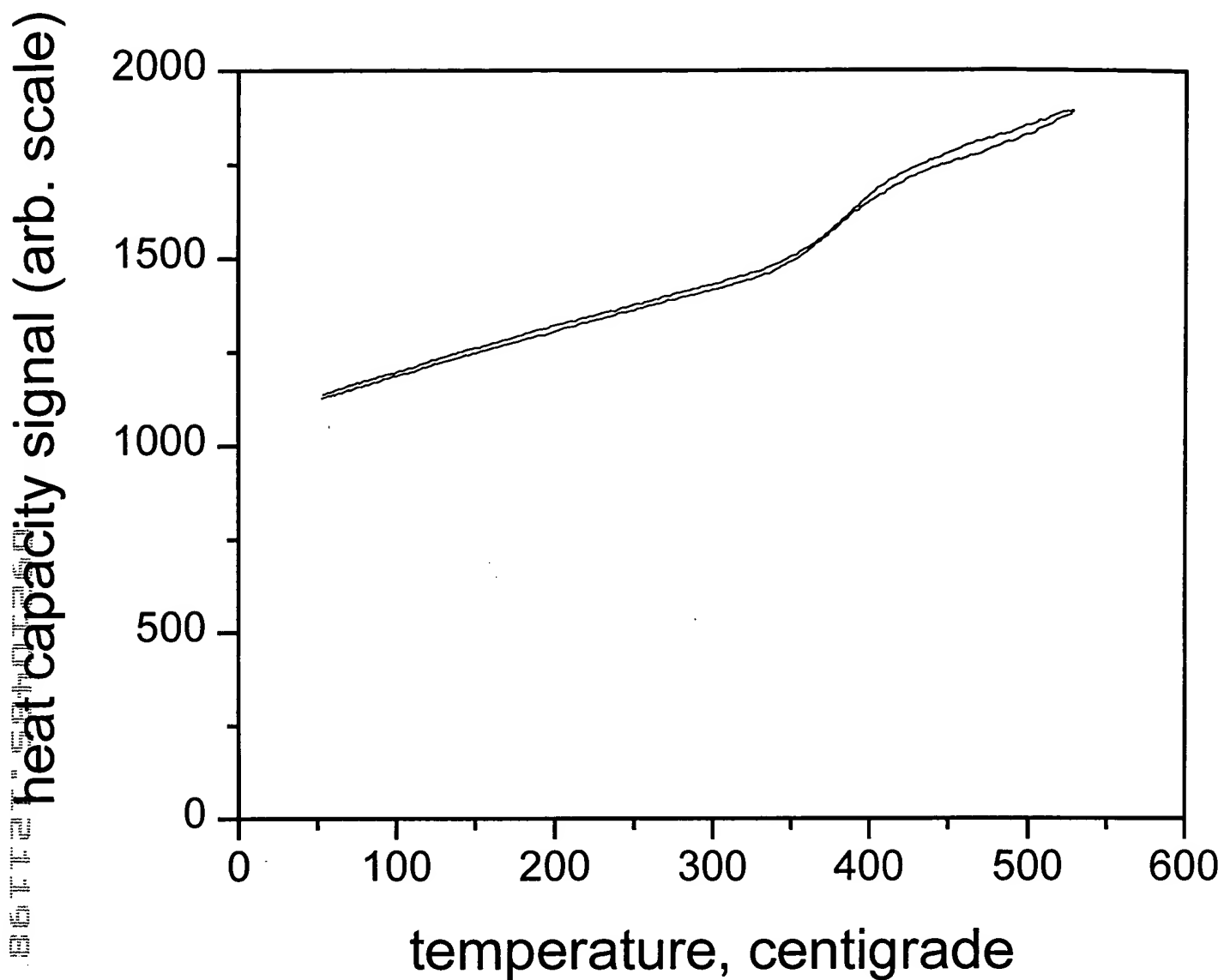


FIG 11A



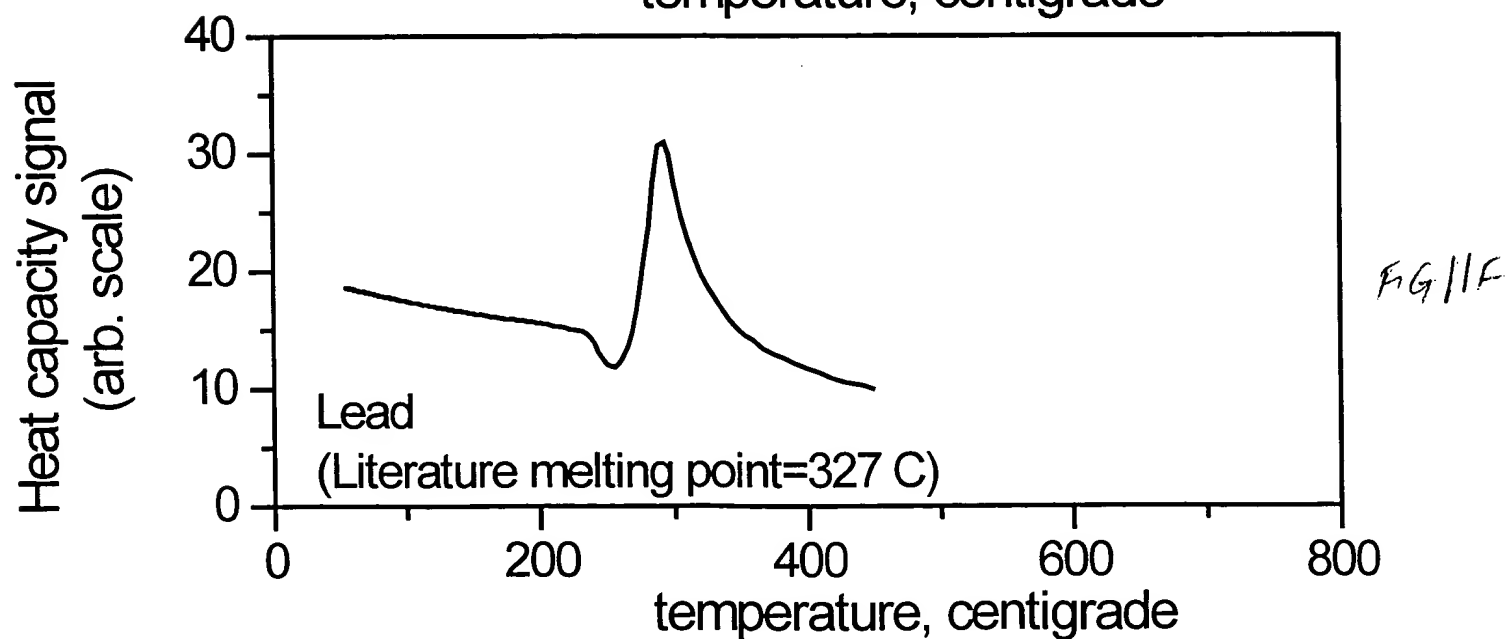
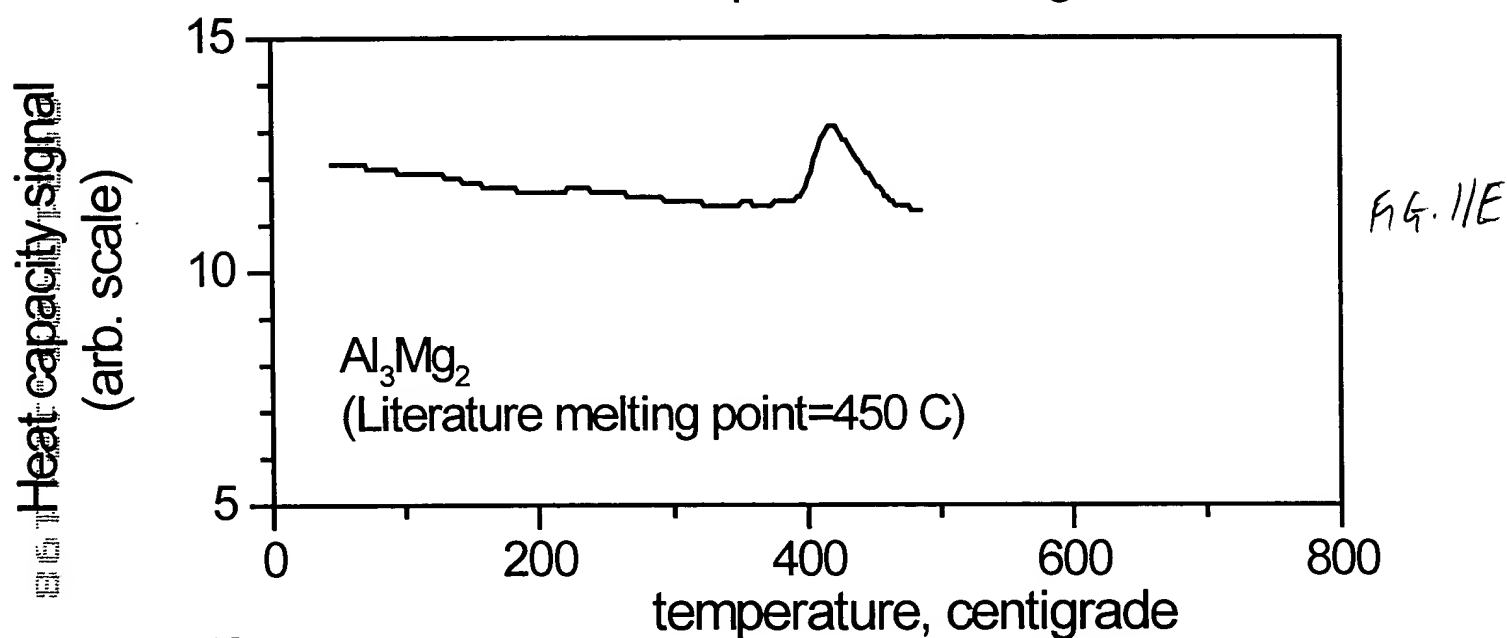
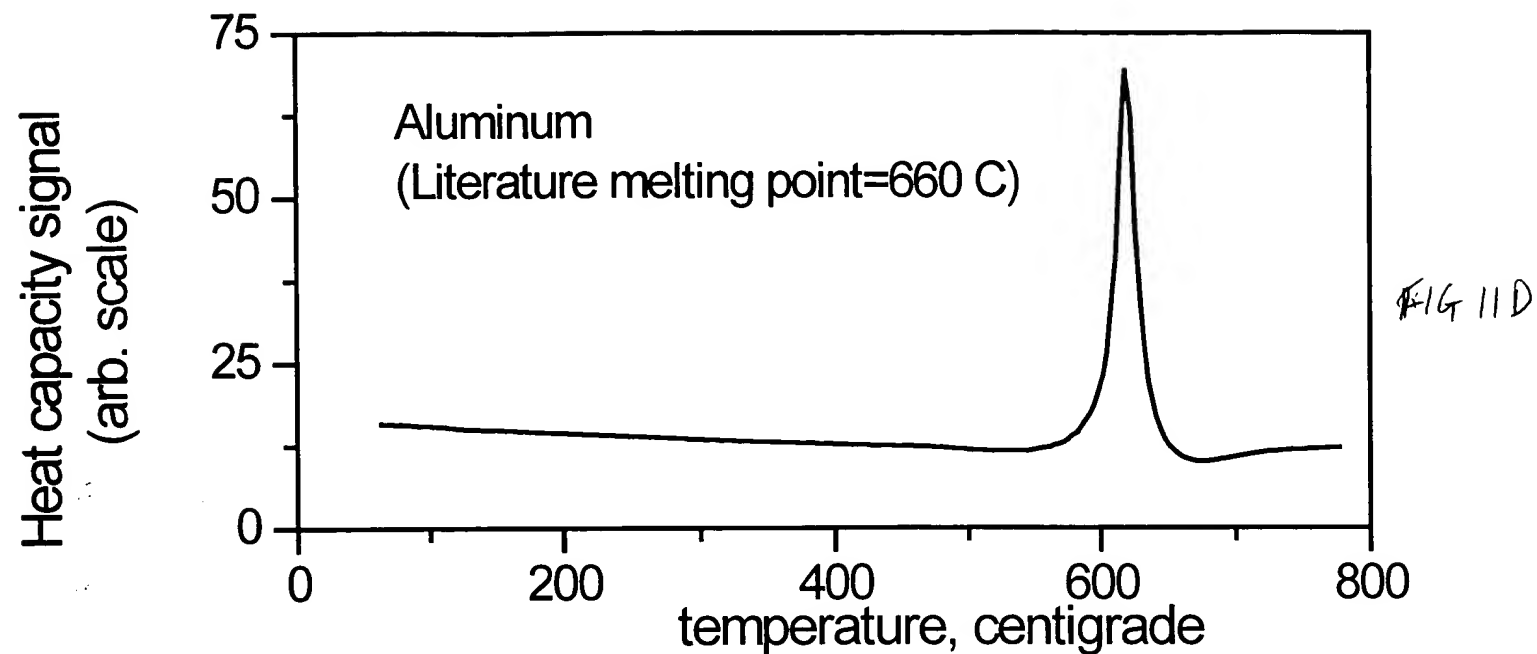
Temperature

Fig 11B



Glass transition in a thin film of  
low-Tg silica solder glass

FIG 11C



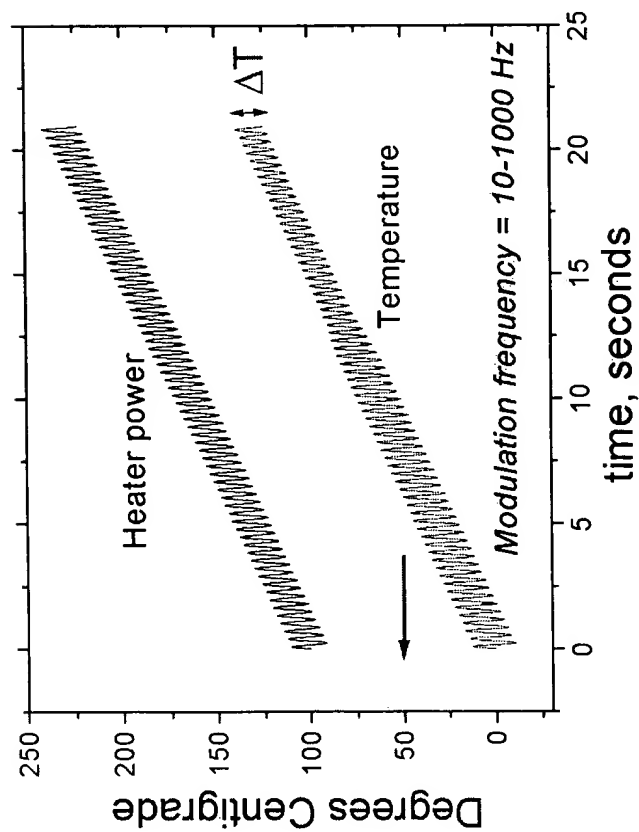


Fig 12A

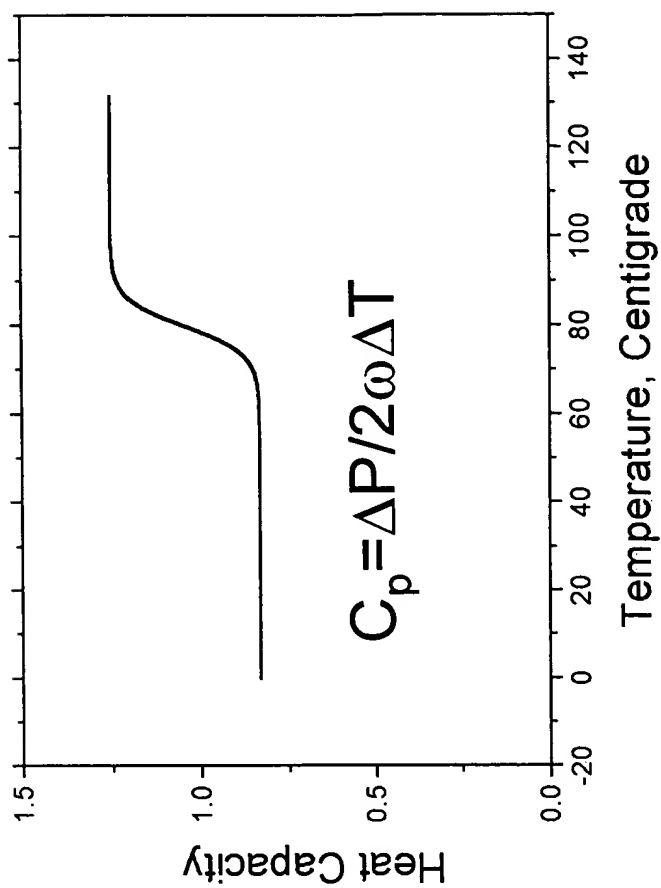


Fig 12B

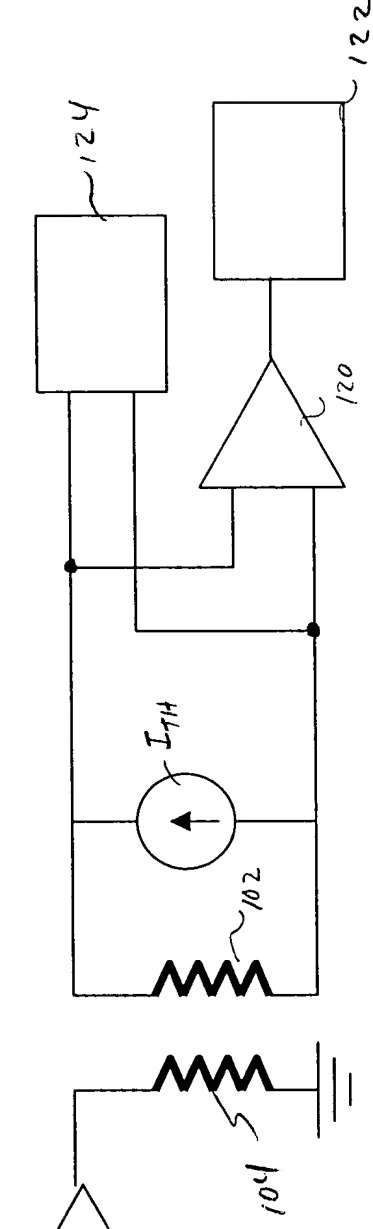
Summing  
amplifier

Lockin at  
frequency  $2\omega$

DC current  
source

$V_H(t)$  (ramp)

$v_H(t) = v \sin(\omega t)$



Heater thermometer

Differential  
pre-amplifier  
with low pass  
filtering.

Analog-to-  
digital  
converter

Fig 12C

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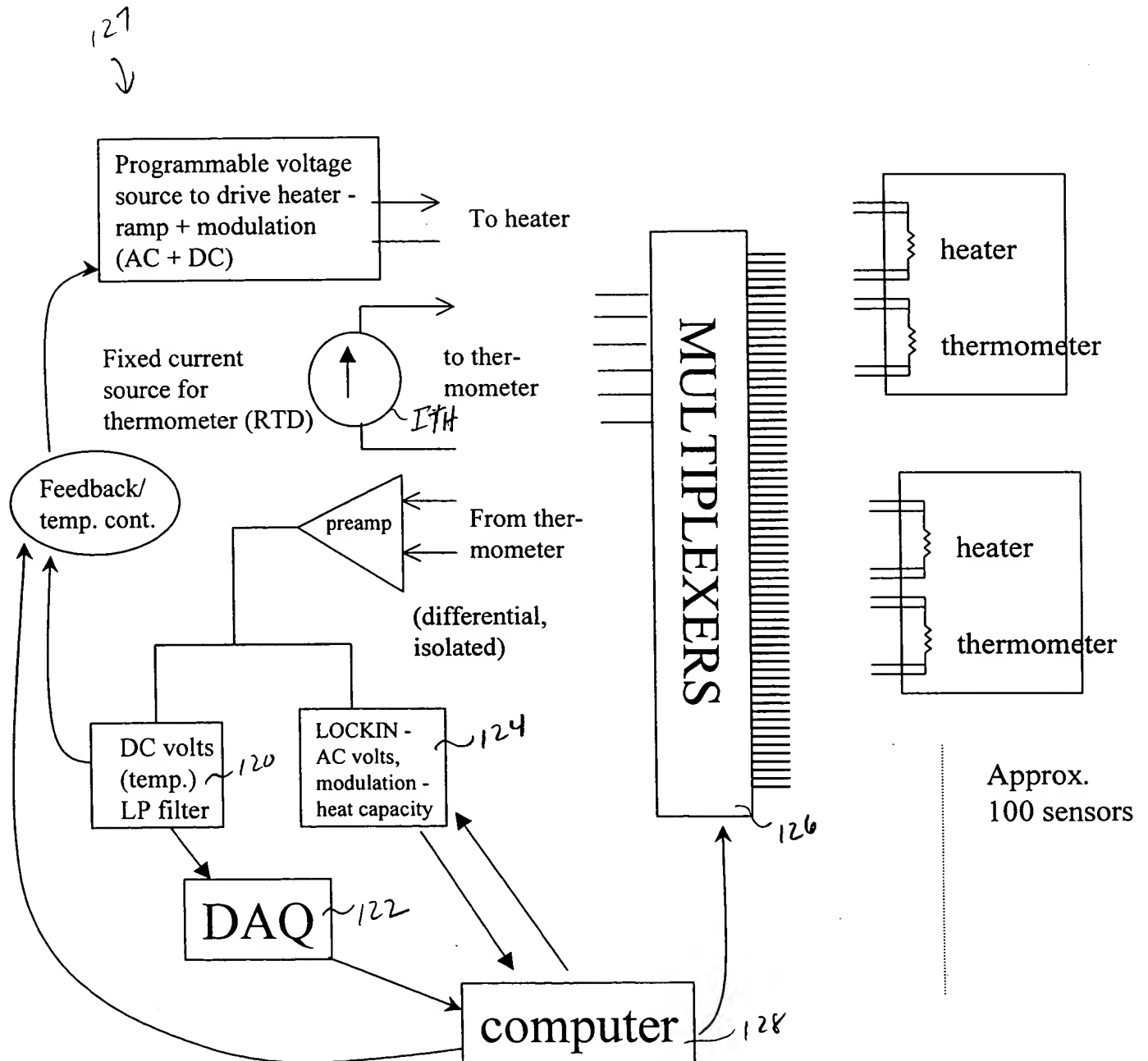


FIG 12D

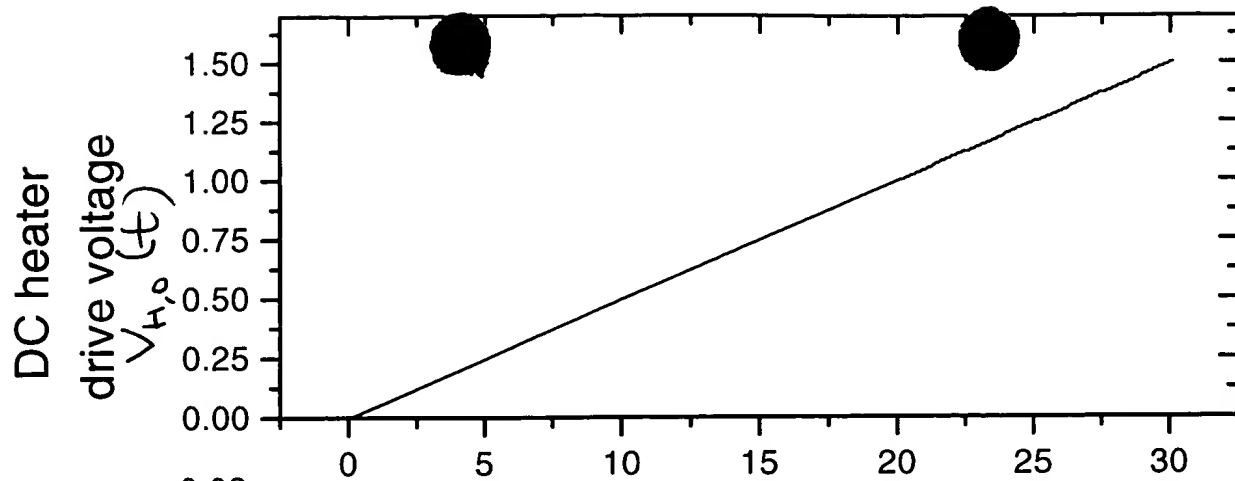


FIG 12E

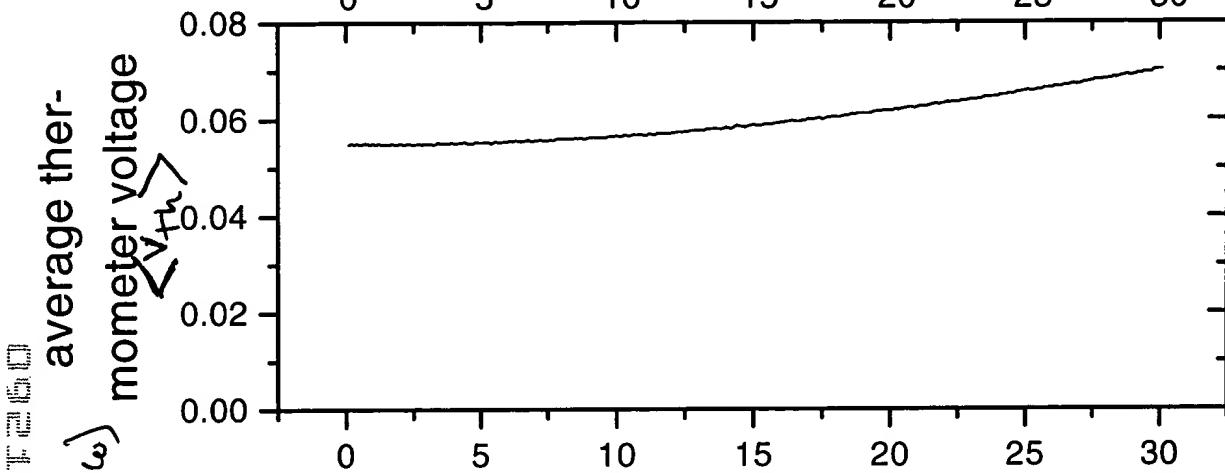


FIG 12F

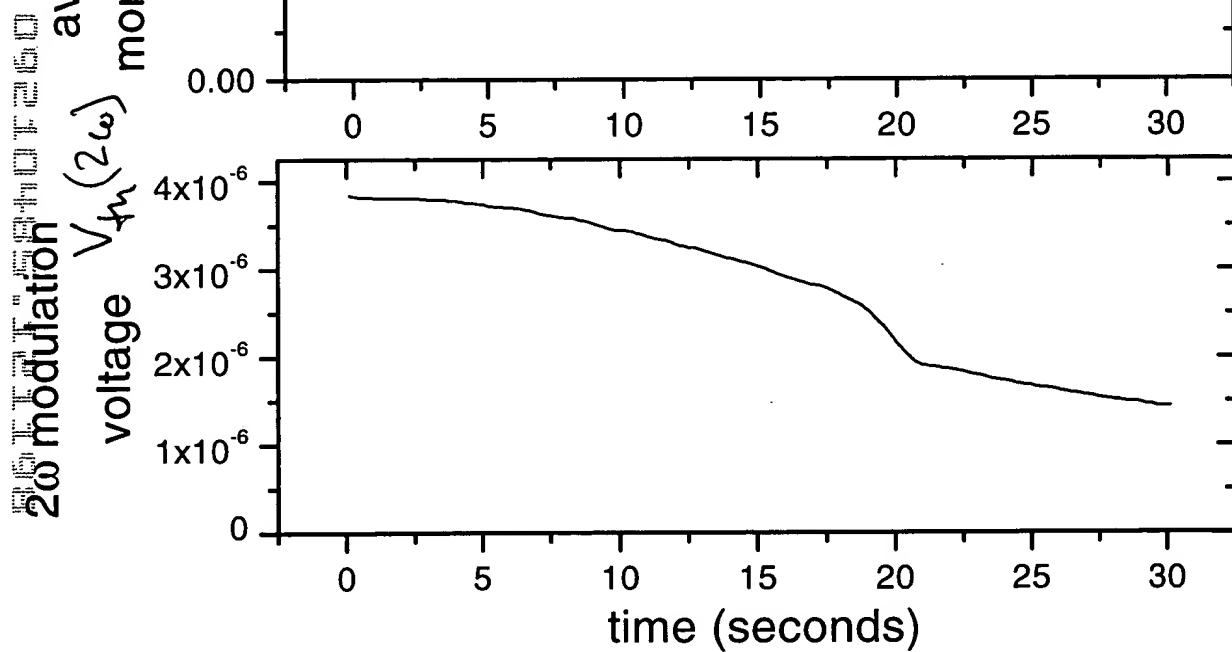


FIG 12G

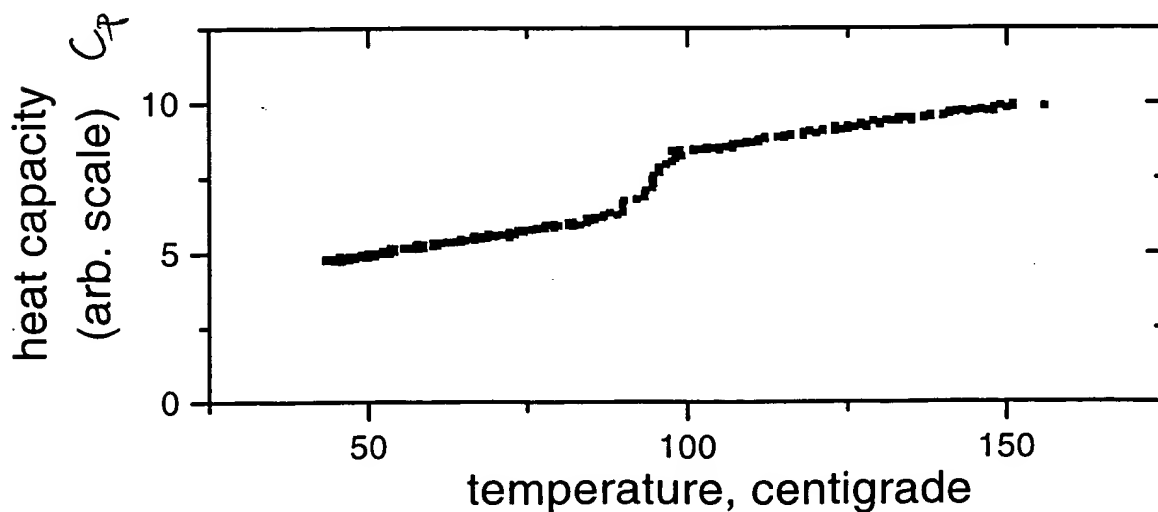


FIG 12H

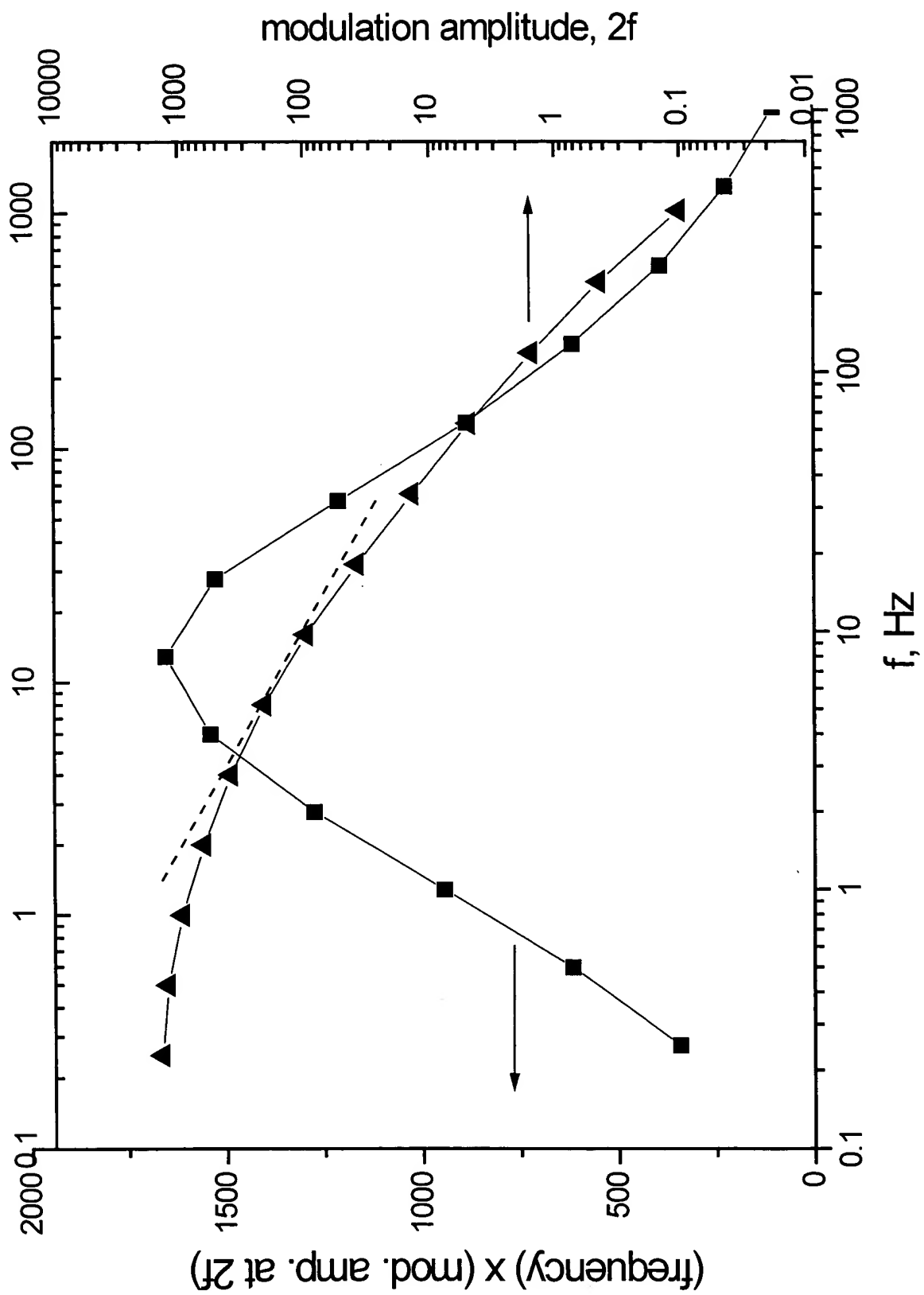


FIG. 12 I

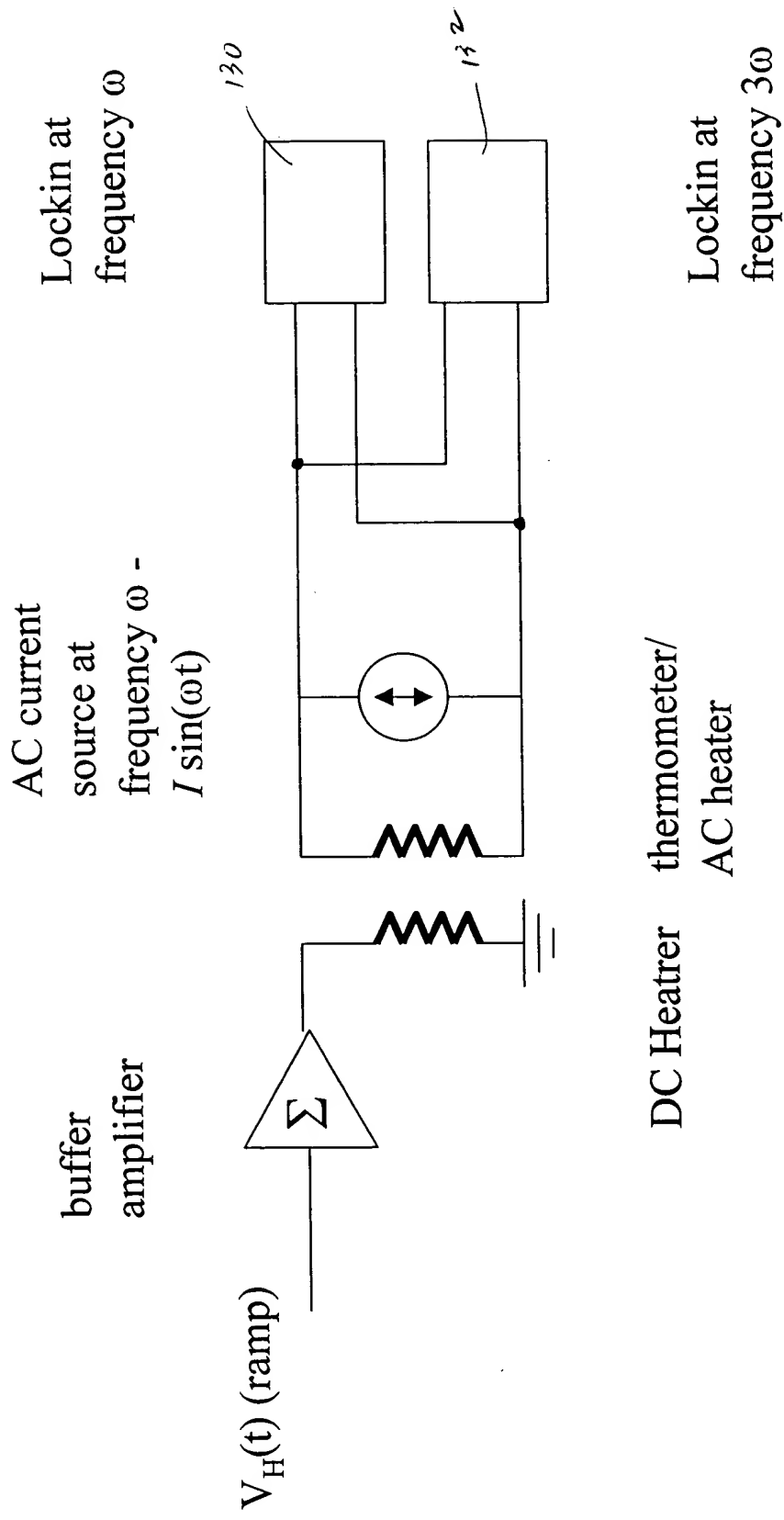


FIG 13A

09210435-121193

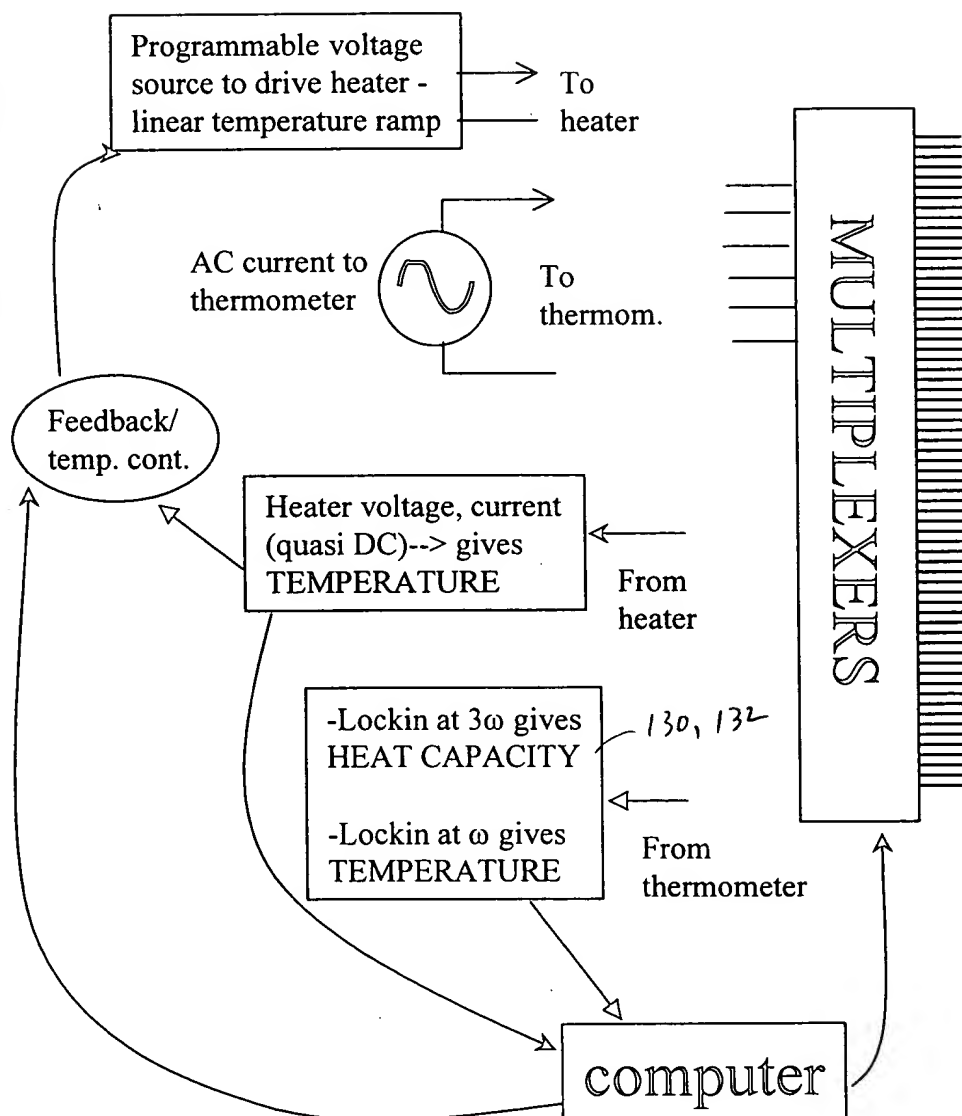
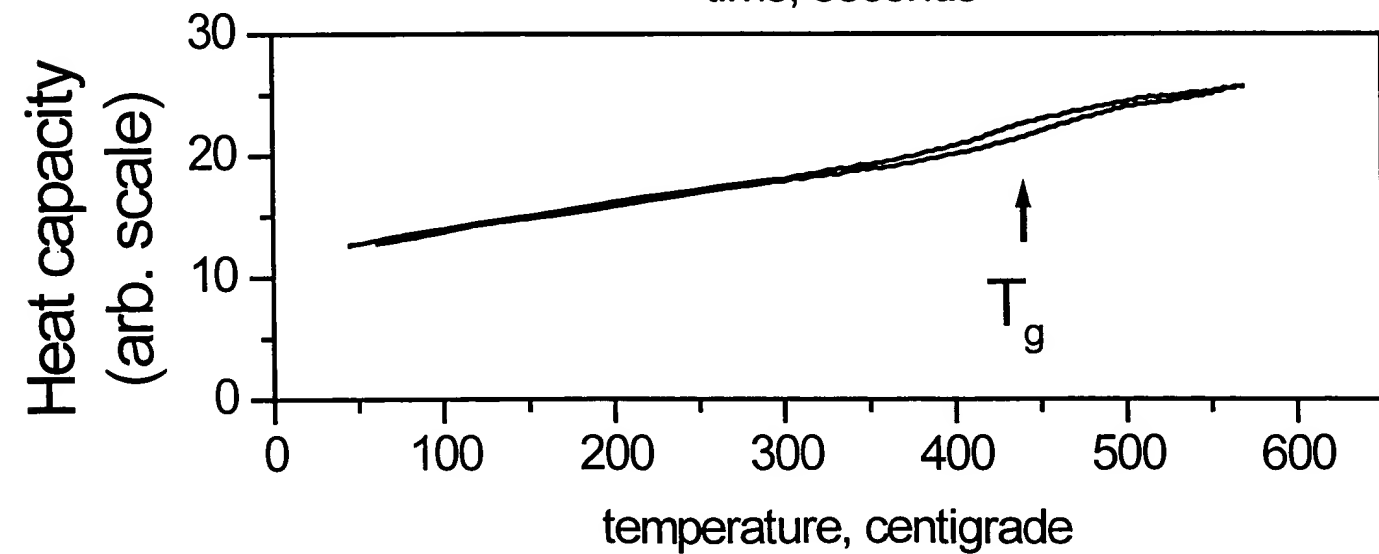
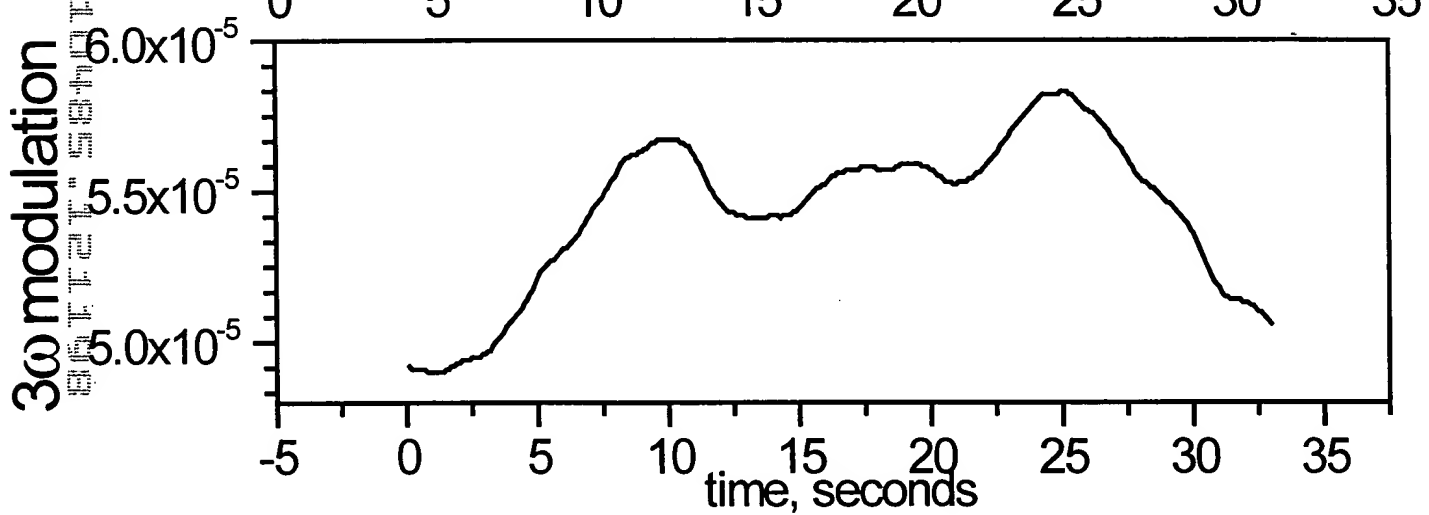
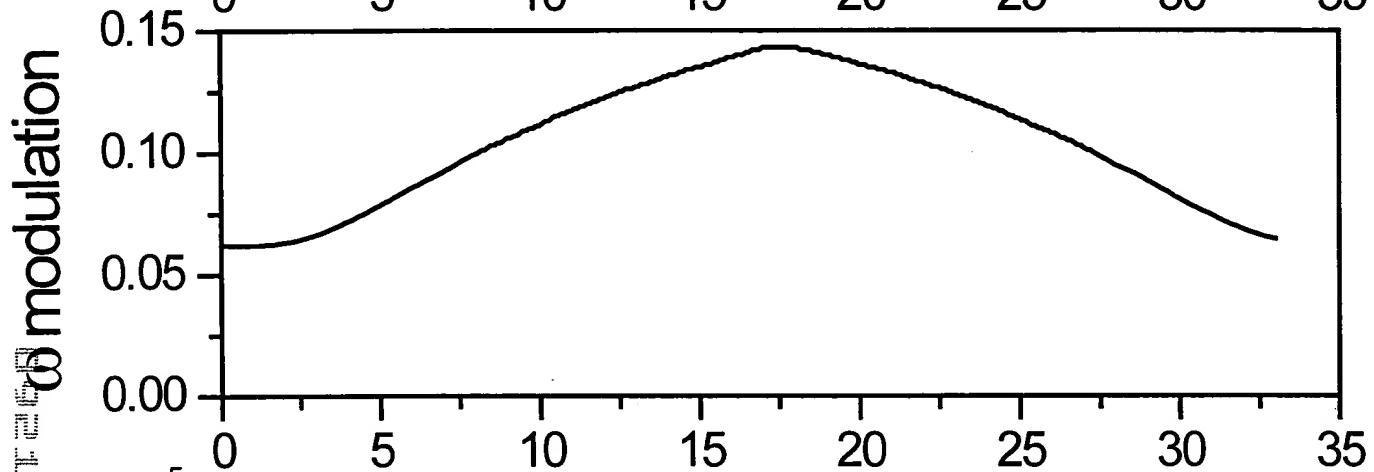
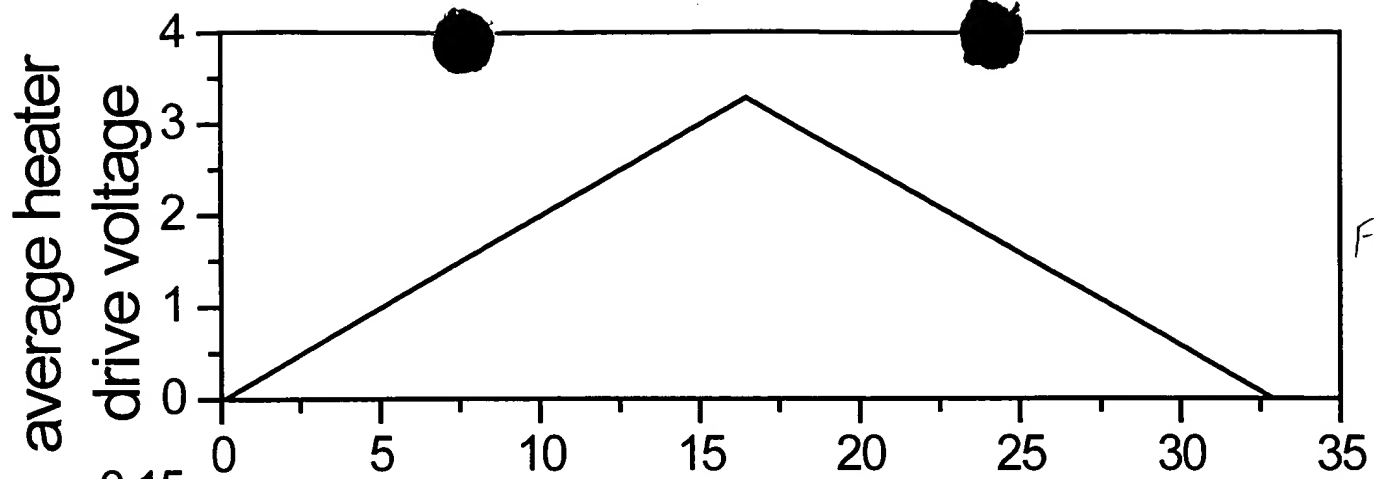


FIG 13B



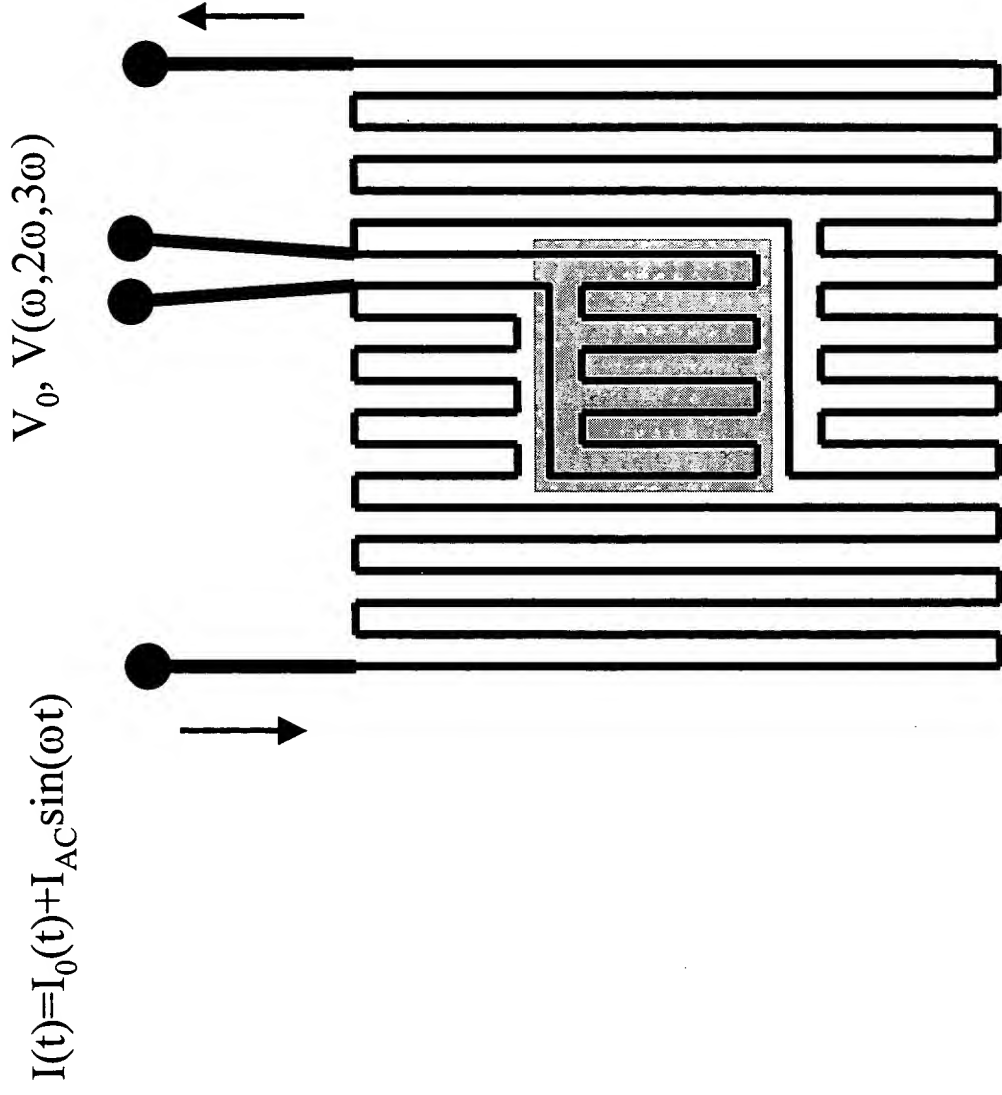
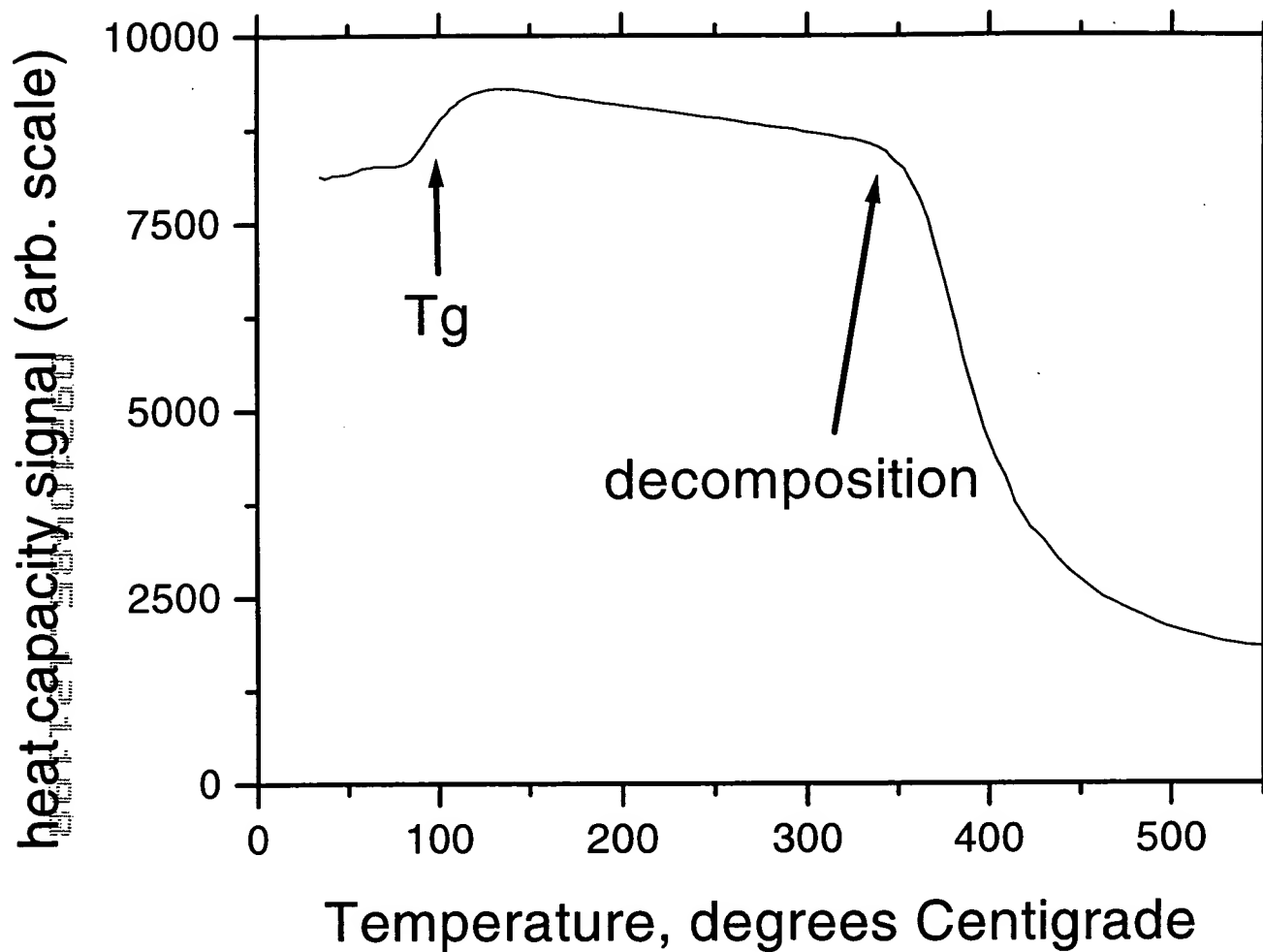


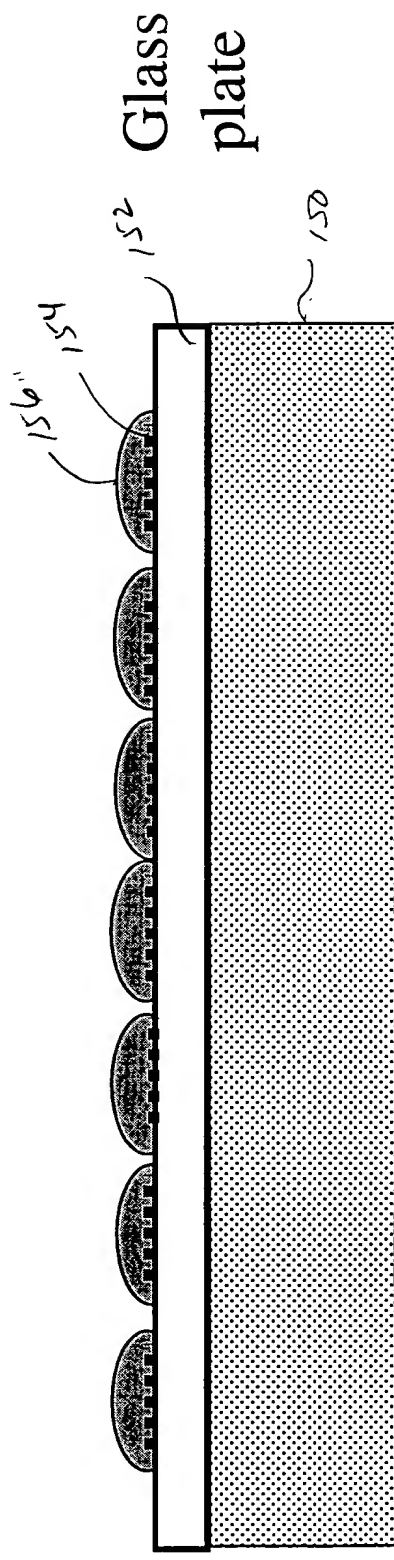
FIGURE 136



Detection of glass transition and  
thermal decomposition of a polymer film

FIG 14

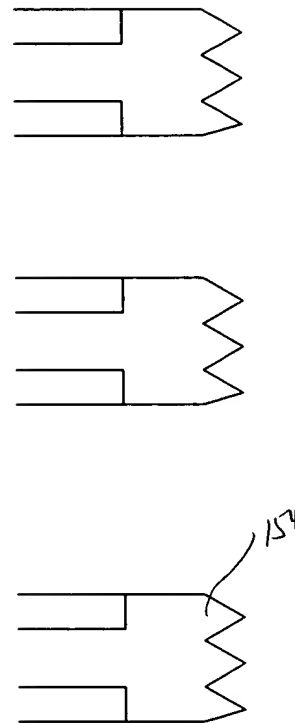
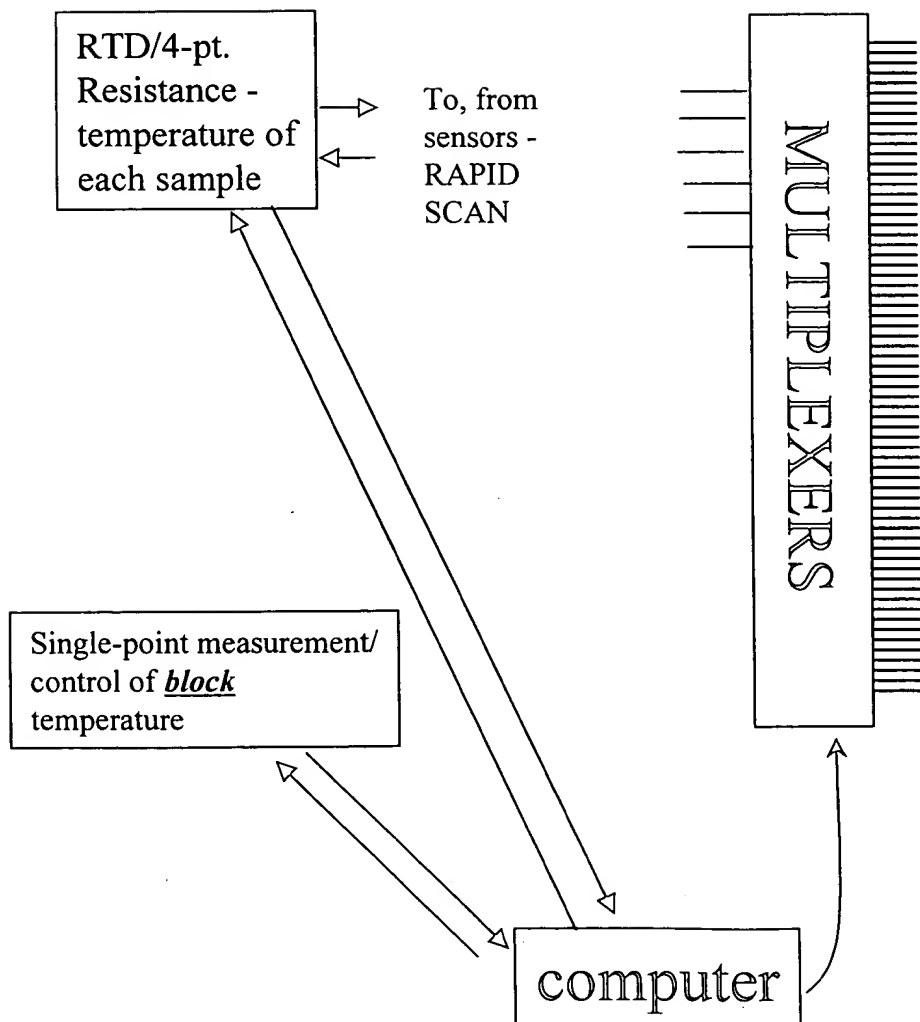
# Sensors/samples at temperatures T<sub>ij</sub>



Block at temperature T<sub>0</sub>

FIG 15A

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100  
sensors

FIG 15B

- Temperature/exotherm
- Dielectric spectroscopy

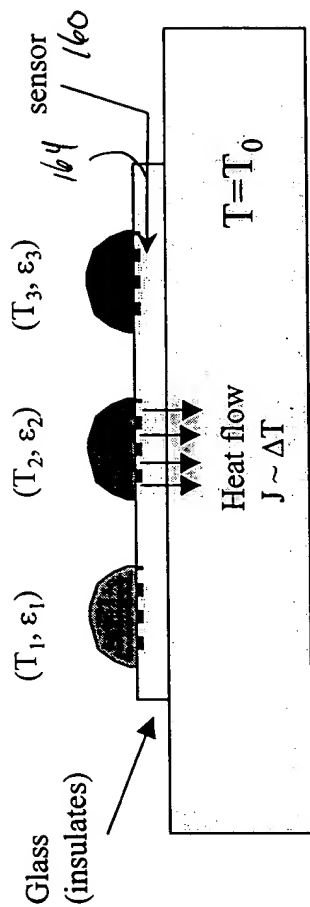


Fig 16A

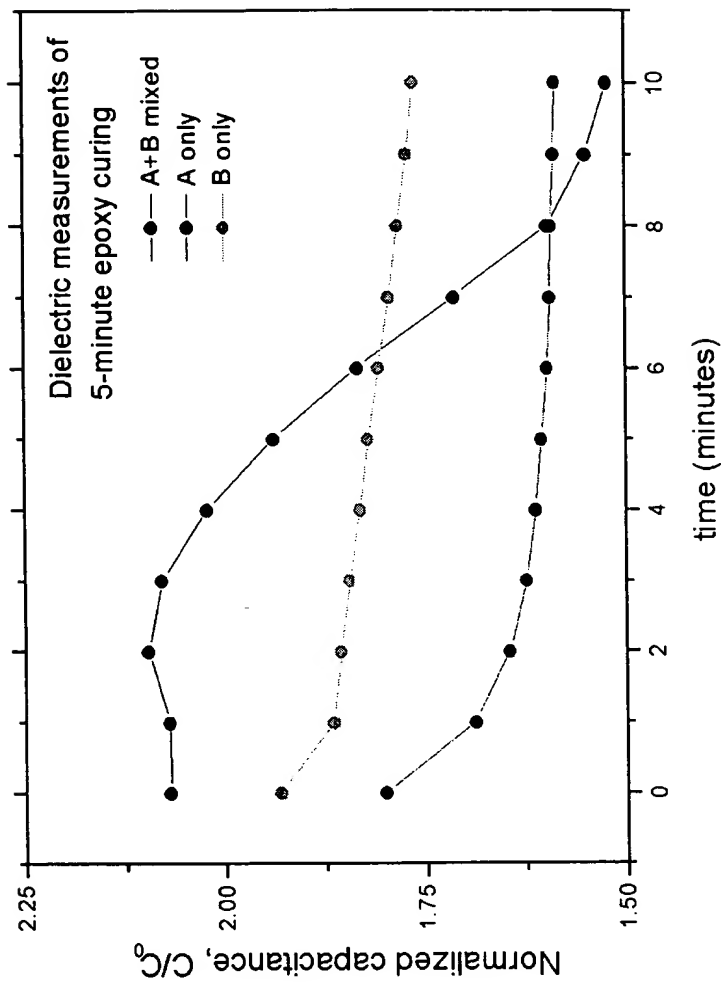


Fig 16B

FIG. 16C

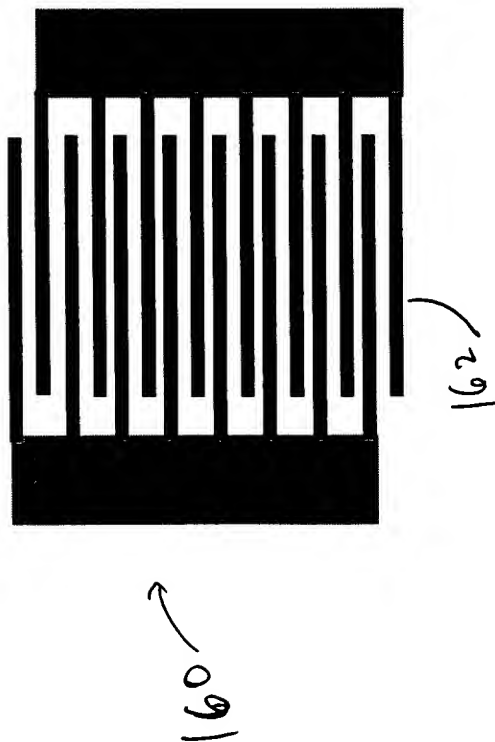
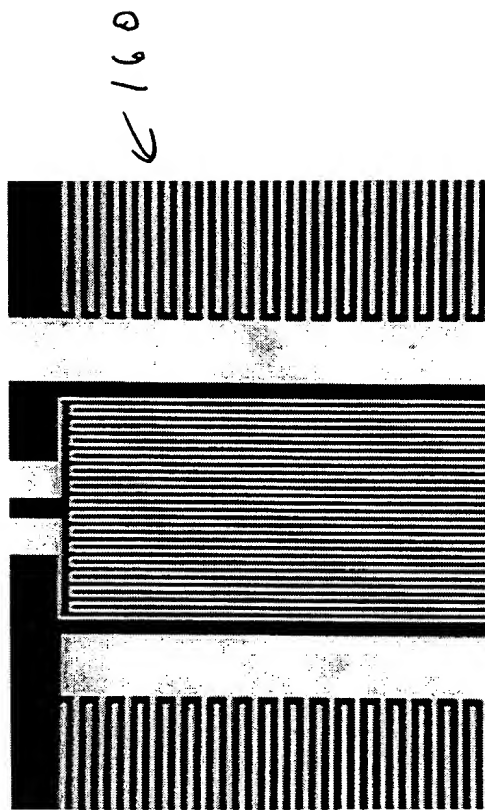


FIG 16D



09210435-121198

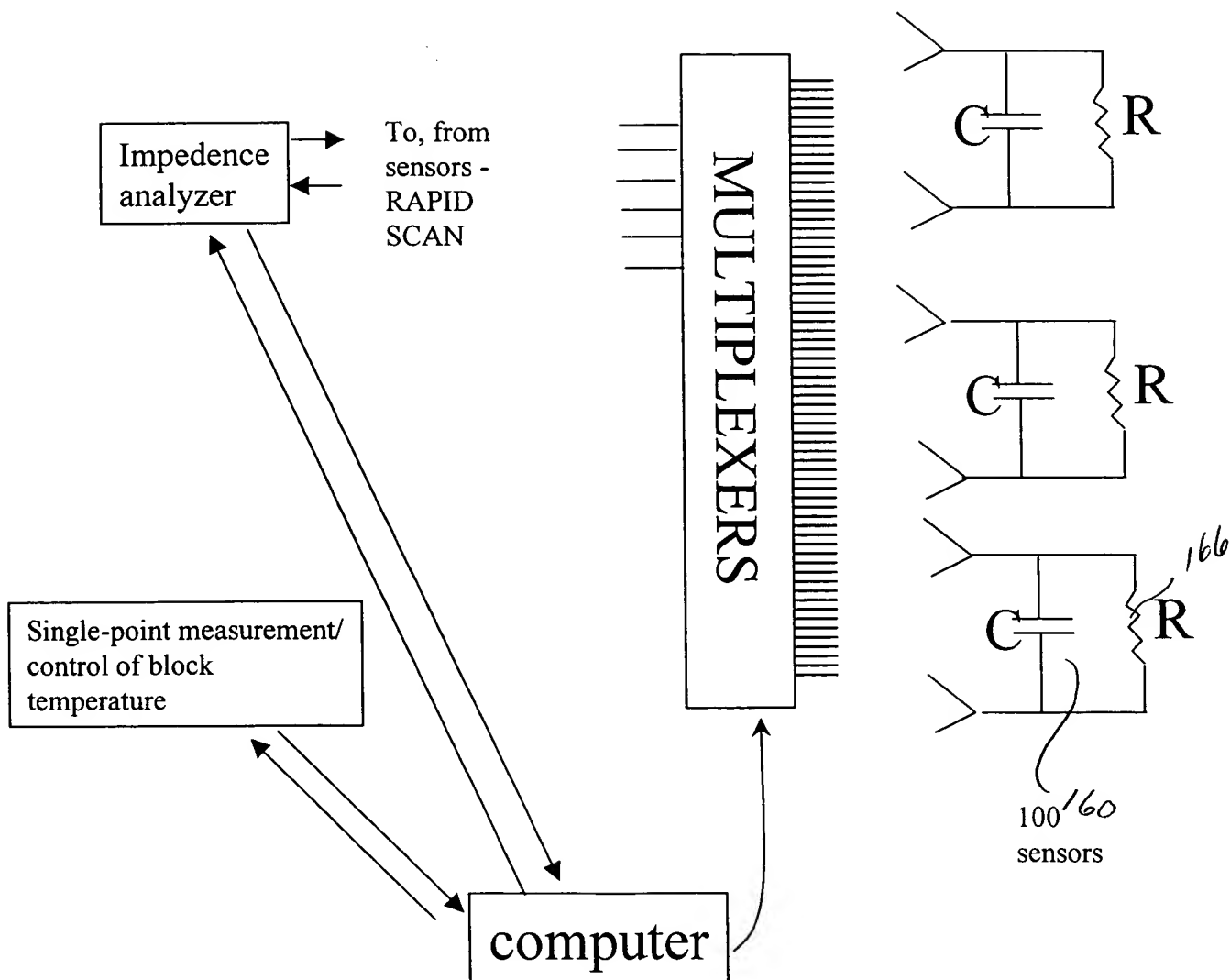
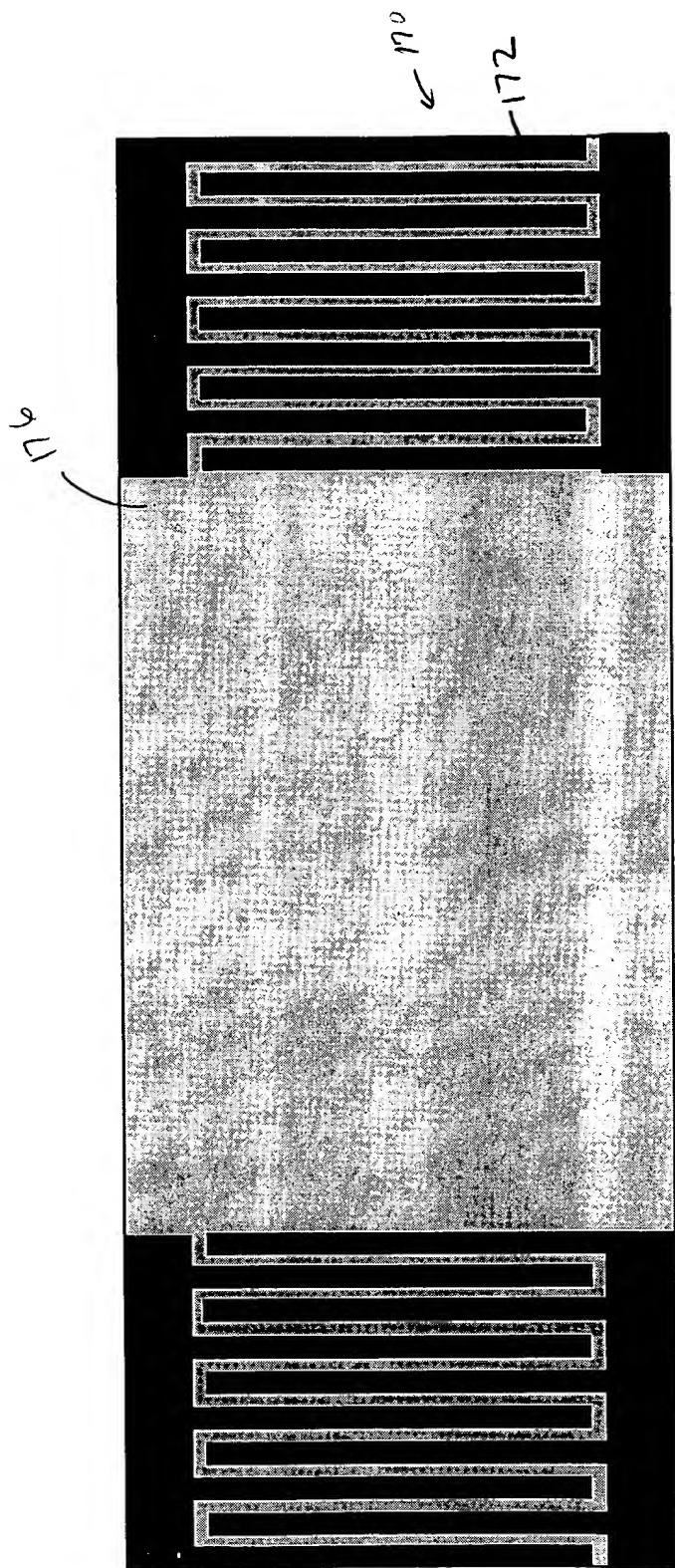


FIG 16E



FG 178

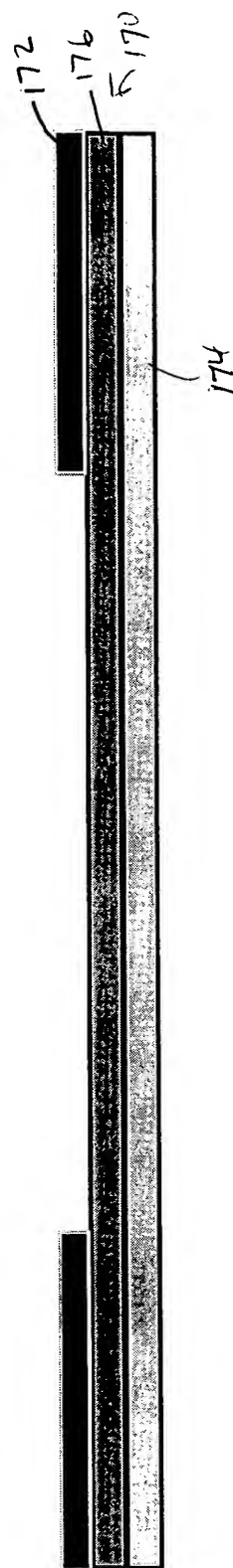


FIG 17B

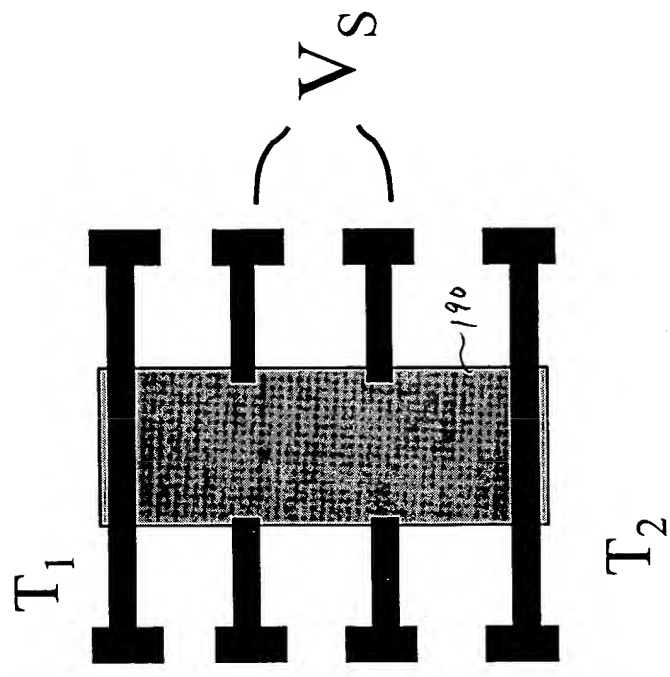


FIG 19A

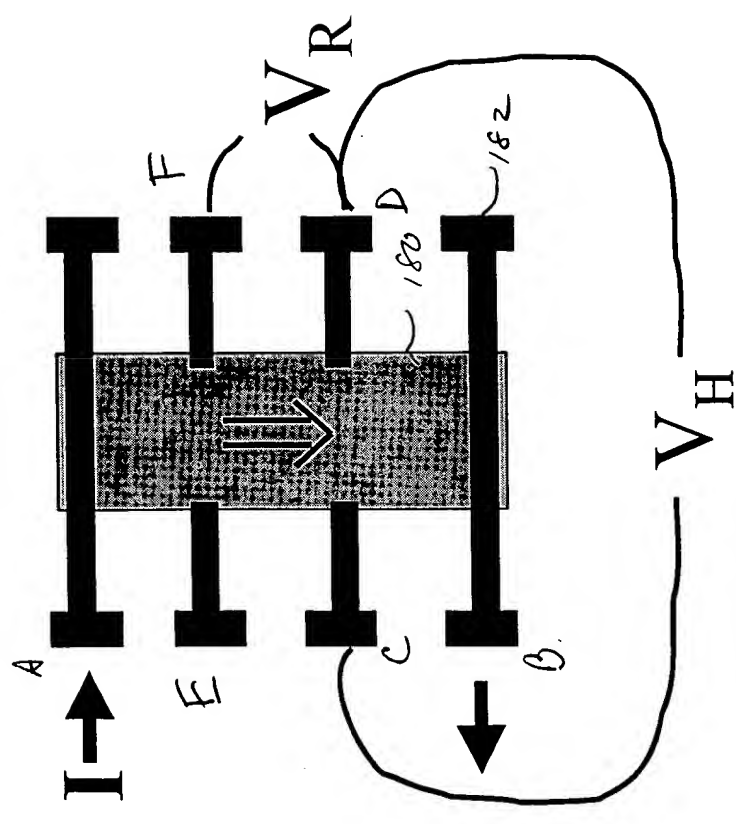


FIG 18A

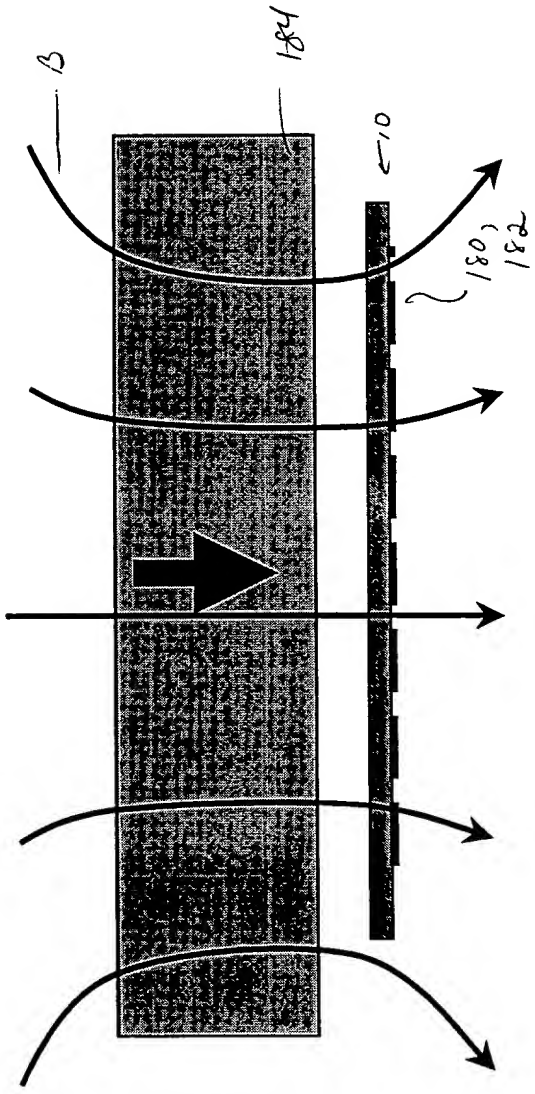


FIG 18B

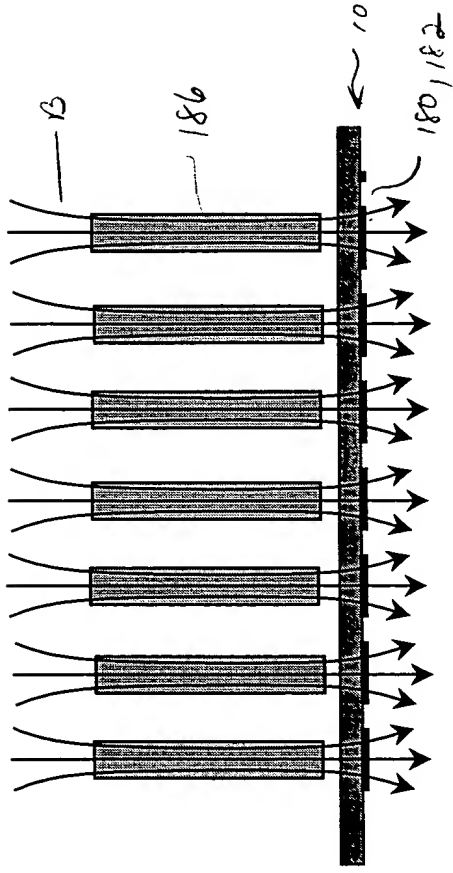


FIG 18C

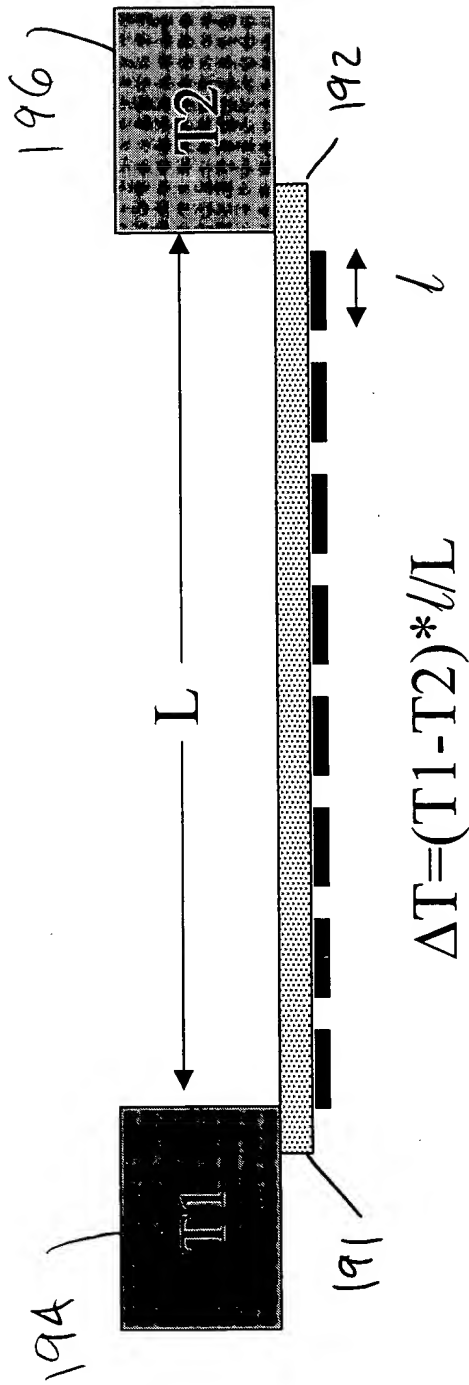


FIG. 19B

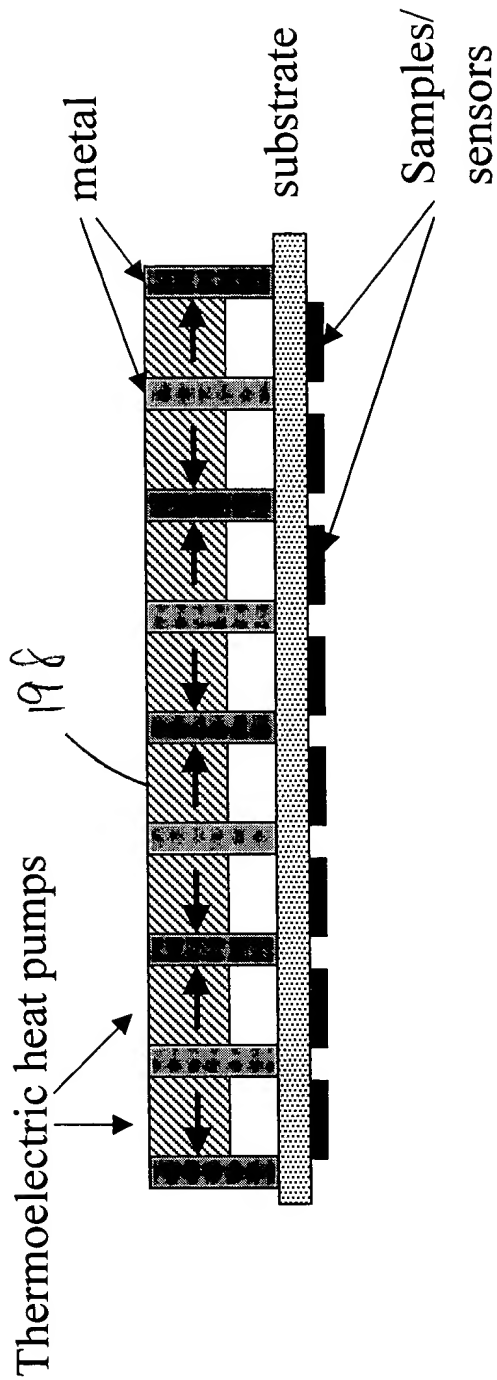
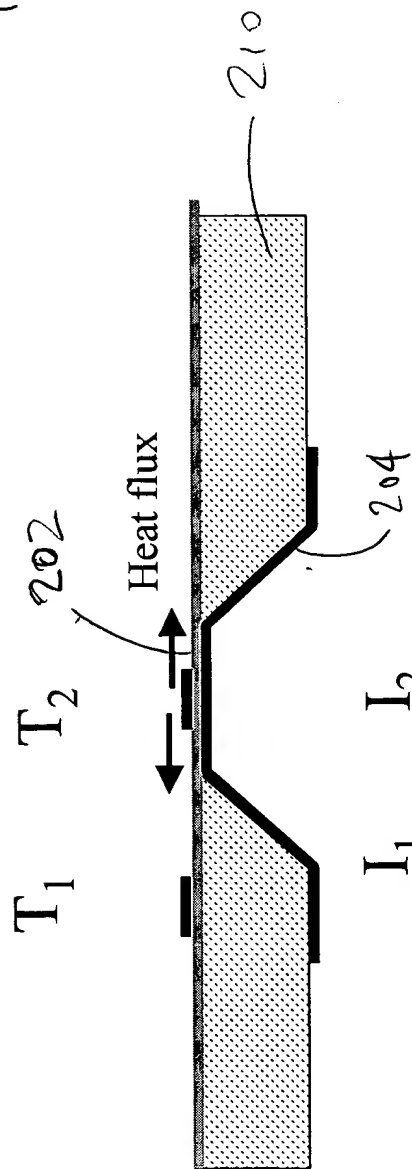


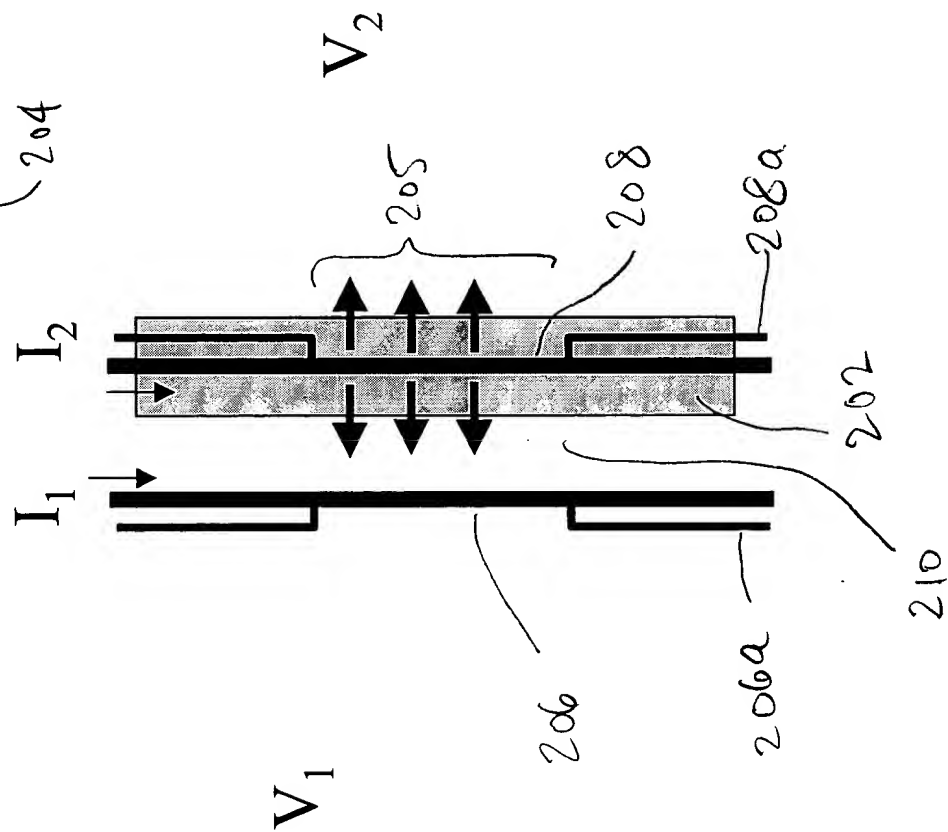
FIG. 19C

Note - electrical contacts to sensors not shown.

Fig. 20A



Feb. 20B



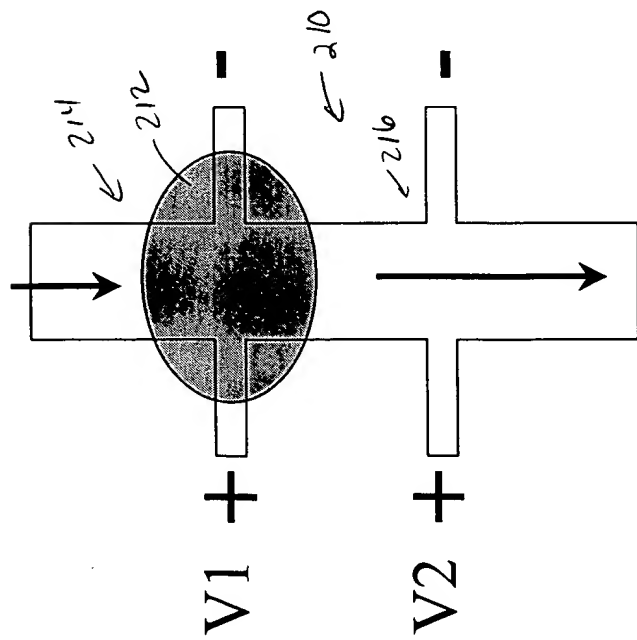


FIG. 21A

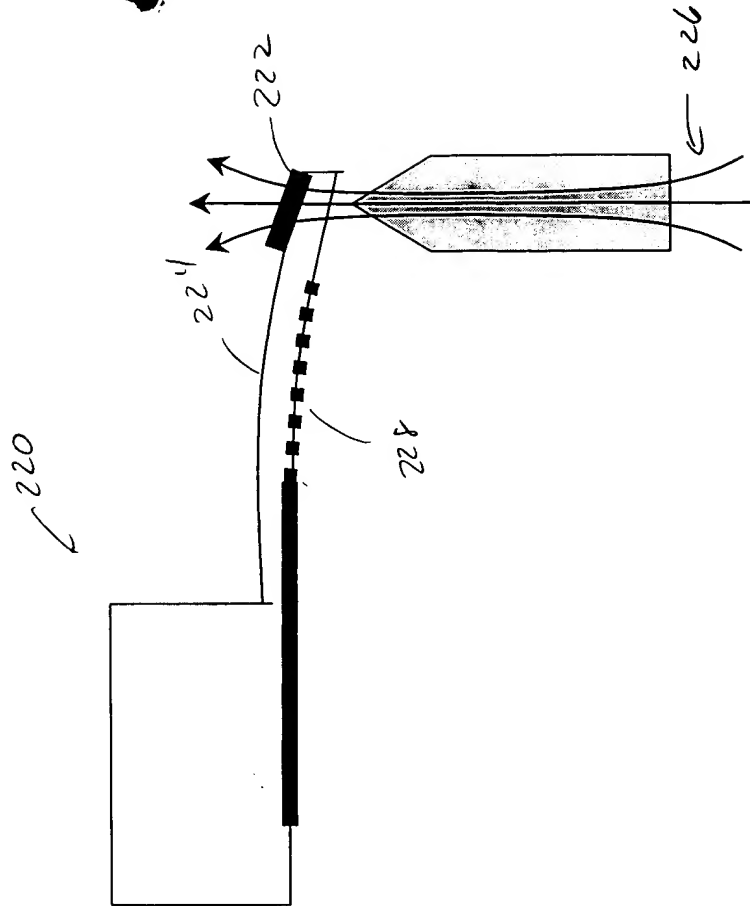


FIG. 21B